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A

TREATISE

ON THE

FEVERS of JAMAICA,

WITH SOME OBSERVATIONS

ON THE

INTERMITTING FEVER of AMERICA,

AND AN

APPENDIX,

Containing ſome Hints on the Means of preſerving the HEALTH of SOLDIERS in hot Climates.

By ROBERT JACKSON, M.D.

Nec mea dona tibi ſtudio diſpoſta fideli,
Intellecta prius quam ſint, contempta relinquas. Lucret. lib. 1.

— διὰπειρα τοι
Βροτων υλεῖχος. Pind: Olym. 4.

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PREFACE.

THE obſervations, contained in the following pages, were made during the time that I lived in Jamaica, or while I attended ſome part of the army in America. The materials were collected between the years 1774 and 1782; and the preſent performance would have been offered to the public before this time, had I ſooner found leiſure to attend to the buſineſs of publication. The inſufficiency of Dr. Hillary's work, the moſt eſteemed book on the diſeaſes of the Weſt Indies, and the only one with which I was acquainted while I remained in that country, furniſhed me with a motive for the undertaking; a motive, which may be thought, perhaps, no longer to exiſt, as two treatiſes have been publiſhed lately by Dr.

Hunter and Dr. Moſeley, expreſsly on the diſeaſes of which I have written. I might remark, that the preſent attempt, ſuch as it is, was nearly completed before the treatiſes to which I allude came to my hands. The views which they afford of fevers, as they differ from each other, ſo they likewiſe differ from thoſe which I have ventured to advance. I have weighed their merits maturely, and cannot ſay that I diſcover any information, which gives me cauſe to change thoſe opinions which I had formed, or which renders the publication of the preſent work unneceſſary. I may obſerve that Dr. Hunter details, with candour and perſpicuity, the mode of practice, which was followed by the moſt reſpectable medical people of Jamaica, at the time that I lived in the iſland. He perhaps preſcribes the bark in larger quantities, than was then cuſtomary;

tomary; but I do not perceive any thing in the plan of treatment eſſentially new: neither will Dr. Moſeley, tho' he purſues innovation with great eagerneſs, be better able to eſtabliſh his claim to original diſcoveries. The plentiful and long continued purging, on which he places a conſiderable ſhare of his merit, has been a favourite practice with numbers for many years paſt; and the free uſe of the lancet, which he recommends ſo much in fevers, was employed in ſeveral diſtricts of Jamaica, before this authour's name was known. Dr. Spence, a practitioner of ſome eminence at Lucca, in the Weſtern extremity of the iſland, wrote a pamphlet (I believe in the year 1776) with a view to enforce its ſafety and utility, in promoting the cure of the general claſs of febrile diſeaſes. The publication was well received, and ſerved to remove the dread

of

of the lancet, which ſome people till then had falſely entertained.

I have thus explained the motive which induced me to write; and I leave it to people of experience to judge of the manner in which I have executed the taſk. I ſhall only obſerve, that, when I firſt intended to prepare my obſervations for the inſpection of the public, I had no other deſign than to mention ſuch circumſtances in the hiſtory and cure of fevers, as did not appear to be generally known. Having ſpent the earlier part of my life in ſituations, which did not admit of a continued plan of ſtudy, I had not till lately much acquaintance with the opinions of medical writers. About four years ago, when I found a ſettled abode, I began occaſionally to look into the works of the ancient phyſicians. In examining Hippocrates, I diſcovered ſuch a ſimilarity in the fe-

vers

vers of the Archipelago, with thoſe of Jamaica, that I ſuſpended my deſign of publiſhing, till I ſhould have given that authour's writings a careful peruſal. I ſoon was convinced that many obſervations, which I had conſidered as my own, were actually known to this father of phyſic; and though I was probably diſappointed in being anticipated in offering ſomething new to the public, I was ſtill gratified by the coincidence of remark, that gave me a confidence in my accuracy, which otherwiſe I durſt not have aſſumed. After I had carefully peruſed the writings of Hippocrates, I conſulted and compared ſuch other of the Greek phyſicians, as I was able to procure. I even deſcended with a ſimilar examination to the preſent times; but as my collection of medical writers, particularly of modern ones, is ſmall, I have probably

bably omitted ſome, who ought to have been mentioned, or perhaps advanced obſervations as my own, which in reality belong to others. If I have done ſo, I muſt be allowed to ſay, that I have done it without conſciouſneſs.

It may appear, perhaps, that I have treated the opinions of great names with too little reſpect: but if facts have at any time occurred to me, which contradict eſtabliſhed theories, I ſhould hope that theſe facts will be examined before they are rejected. No medical authority ought to prevail over the certain evidence of truth. I am not conſcious of having miſrepreſented, for the ſake of a theory, the minuteſt circumſtance of what I have actually ſeen;—if I have been miſtaken in any inſtance in forming concluſions, I ſhall receive the correction of my inaccuracies with gratitude.

CHAP.

CHAP. I.

OF THE GENERAL CHARACTER OF THE REMITTING FEVER OF JAMAICA.

AS it is perfectly well known, that fevers, which are eſſentially in themſelves the ſame diſeaſe, vary in their appearances, from difference of climate and ſeaſon, it would be very ſuperfluous to attempt any proof of what is ſo generally acknowledged. Even Hippocrates, who lived more than two thouſand years ago, does not ſeem to have been unacquainted with this fact. (1) This induſtrious phyſician, as we learn from many paſſages in his works, not only viſited the various iſlands in the Ægean Sea; but travelled likewiſe into various parts of the adjacent continents. (2) The motive of his journeys, we are taught to believe, was principally to obſerve the different ſituation of places, and to mark their correſponding diſeaſes. He has deſcribed very fully, in a curious and uſeful treatiſe, the effects of air and local ſituation on the human frame; and in the hiſtory of fevers, related in the books of

Epidemics, has ſeldom forgotten to mention, not only the general conſtitution of the ſeaſons with reſpect to diſeaſes; but likewiſe the nature of the climate, where his obſervations were more particularly made. The ſpecies of fevers, it is true, that are found in the writings of Hippocrates are extremely multiplied; yet this authour ſeems ſtill to have been clearly of opinion, that diſeaſes, which are eſſentially the ſame, aſſume, in ſome reſpects, a different appearance in the iſland of Thaſus, and at Abdera, on the contiguous coaſt of Thrace. Obſervations to the ſame effect have been made by many others in different parts of the world; nor is the fact capable of being better illuſtrated in any country than in Jamaica; where a very ſmall change of place, or the ordinary revolution of ſeaſons, are often obſerved to influence in a high degree, the appearances of the common endemic of that iſland. But this obſervation,--that local ſituation and the change of ſeaſons, are the cauſe of varieties in the appearances of the ſame diſeaſe, has been ſo long known, that it is almoſt unneceſſary to mention it; nor would it have been repeated now; unleſs to obviate any objections which might be made to the hiſtory, that is given in the following pages, ſhould it not be found exactly

to

to correſpond, with that which has been obſerved by others, who have lived in the other iſlands of the Weſt Indies, or in other parts of Jamaica; or perhaps even in the ſame part of Jamaica, at a different period of time. It is preſumed, indeed, that the ſame fundamental diſtinctions of fever obtain in every iſland within the tropics; yet the deſcription that is given in this place, (it may not be unneceſſary to mention), is affirmed to be ſtrictly exact, only in the diſtrict about Savanna la Mar; and that only for a ſhort ſpace of time: viz. from the year 1774 to the year 1778.

The fever, that chiefly prevailed at Savanna la Mar during the period mentioned above, was uſually mild in its ſymptoms, and more regularly remitting in its form than I underſtood the endemic diſeaſe to be in moſt other parts of the iſland. To what circumſtances in the local ſituation this might be owing, I do not pretend to determine. Savanna la Mar is ſituated cloſe by the ſea: its particular ſcite, and the ſurrounding country to the diſtance of ſeveral miles is perfectly level; whilſt in conſequence of its being open to the ſea on the eaſt, it is viſited early, and conſtantly by a ſalutary and refreſhing breeze. There is a ſmall rivulet, indeed,

which, loſing itſelf almoſt entirely in mud, forms a moraſs that partly ſurrounds it on the north. From vicinity to this moraſs the ſituation of Savanna la Mar has been ſuſpected to be unhealthy; but it is not ſo in fact. The ſea at high water, particularly in the ſpring tides, overflowing the ſwampy ground, contributes in a great meaſure, perhaps, to diminiſh the more uſual noxious qualities of the marſh exhalation. (3) The opinion of many eminent writers, however, is not altogether favourable to this idea; but there ſeems to be reaſon to doubt, whether the opinion formed by thoſe writers in this inſtance, is the reſult of accurate and careful obſervation; or if it is merely a ſuggeſtion of theory. I am inclined to the latter way of thinking, as I have never found the neighbourhood of Salt-marſhes, in the different parts of America that I have had the opportunity of viſiting, leſs heathful than the reſt of the country:---on the contrary, they were frequently more ſo.

Before proceeding to a particular deſcription of the fever, that chiefly prevailed in the diſtrict of Savanna la Mar, it may not be ſuperfluous to give the outline of its character, that we may be the better enabled to trace its reſemblance with the fevers of other climates, and

and to determine its place in the general claſs of febrile diſeaſes. The common fever of Savanna la Mar, which, as I mentioned before, was uſually mild in its ſymptoms, and regular in its form, ſeems to be properly ranked with thoſe, that ſtrictly ſpeaking are called remitting. It is difficult to fix the boundaries between remittents and intermittents, if a fixed boundary actually exiſts. The paroxyſms of the fever of Jamaica are obſerved, in many inſtances, to terminate in more perfect remiſſions than the paroxyſms of the endemic of North America; which is known to be fundamentally an intermitting diſeaſe. Hence authors generally are of opinion, that all the difference which appears to take place in thoſe fevers, depends merely on an accidental cauſe: viz. on the greater or leſs heat of the climate. I ſhall not be poſitive that it is not ſo; yet I cannot help remarking that certain appearances incline me to be of opinion, that there ſubſiſts, between the endemic of Jamaica and the endemic of North America, a difference, in ſome degree, fixed and eſſential. I cannot pretend to aſcertain the difference preciſely; or to offer a conjecture about the modification of the morbid cauſe in which it conſiſts; yet the following circumſtances give reaſon to be-

lieve that to a certain degree at leaſt it actually takes place. The common fever of Jamaica, for inſtance, was not only diſpoſed to terminate of its own accord; but it was diſpoſed to terminate on certain critical days, often at an early period, and by ſigns of criſis too clear to be miſtaken: neither did the Peruvian bark, in the manner at leaſt in which it was managed, ever cut ſhort its courſe with certainty. The endemic of America on the contrary often laſted long. It frequently, indeed, changed to another diſeaſe after a length of time; but no period could be aſſigned for its natural termination. The ſigns of criſis, it may likewiſe be remarked, were ſo obſcure as ſcarcely to be diſtinguiſhed with the cloſeſt attention; at leaſt for my own part I will own, that after an experience of ſeveral years, and the greateſt care in obſerving the minuteſt circumſtances, I never yet was able to ſay with confidence, that the endemic of America, particularly in the northern provinces, was gone not to return again, till the hour of its return was paſt: neither did the Peruvian bark, though its effects were ſo equivocal in the fever of Jamaica, ſcarcely ever fail of ſtopping the progreſs of this diſeaſe. To which we may add, that the complaint, which ſtrictly ſpeaking is called the

the intermittent, or ague and fever, can ſcarcely be ſaid to belong to Jamaica; at leaſt it was not known at Savanna la Mar. In the courſe of four years I did not once obſerve it; and thoſe, who had lived much longer at this place, aſſured me they had never ſeen an inſtance of it; unleſs in perſons who were newly arrived from aguiſh countries. This is a fact of ſome importance, as it ſhews to us, that, though the proper intermittent is not the endemic diſeaſe of the country, it is ſtill capable of exiſting in the climate:---no weak argument, that, the two diſeaſes of which we have been ſpeaking, actually do poſſeſs ſome difference in the modification of the general cauſe, though we are unable to define the preciſe bounds and limits of it.

The circumſtances which I have mentioned might incline us to be of opinion, that the fever of Jamaica, and the common endemic of America are not exactly the ſame diſeaſe; that is, that though they depend on the ſame general cauſe; yet that this cauſe undergoes ſome fixed and permanent modification in thoſe different climates, ſo that an eſſential difference actually ariſes. But though this really appears to be the caſe; yet I muſt acknowledge, that the reigning epidemic of the ſouthern provinces of America, often loſes

its diſtinctive marks of intermiſſion in the hot months of ſummer; whilſt it approaches, in other reſpects, ſo near to the fever of Jamaica, as to be diſtinguiſhed from it with difficulty. This was particularly the caſe at Ebenezer in Georgia, in the year 1779, during the months of June and July. A cold fit was ſeldom obſerved in this place; unleſs perhaps in the firſt attack; lowneſs, languor, head-ach, pain of the back, and other diſagreeable feelings remained even in the moſt perfect remiſſions: the diſeaſe was likewiſe much diſpoſed to terminate of its own accord: on the uſual critical days, frequently by ſigns of criſis, that were far from being obſcure: yet though theſe reſemblances were ſo very ſtriking, the fever of Ebenezer was perfectly under the controul of Peruvian bark, which was not exactly the caſe with that of Jamaica. I muſt remark, however, that bark was uſed with a freedom in America, that I never thought of attempting in the Weſt Indies.

But though it ſtill may be thought doubtful by ſome, whether the autumnal fever of aguiſh countries, and the endemic fever of Jamaica are characteriſtically different, or eſſentially the ſame diſeaſe; yet it is not ſo difficult to trace a ſpecific reſemblance, between

tween this fever of the Weſt Indies, and the prevailing endemic of the Ægean Sea. The fever deſcribed in the Epidemics of Hippocrates has every ſtriking feature of the diſeaſe which is the ſubject of the following treatiſe. The general character is the ſame; the courſe and mode of termination are often alike. If the duration is ſometimes different, it is probably much owing to the more deciſive practice of the moderns: for though it remains uncertain, whether a remedy has yet been diſcovered, which abſolutely cuts ſhort the fever of Jamaica in the midſt of its courſe; yet no doubt remains, that there are various modes of treatment, which may, and actually do render the ordinary changes of the critical days, decidedly critical. The fevers of the Ægean Sea, as deſcribed by Hippocrates, and of Minorca, as deſcribed by the accurate Cleghorn, bear the neareſt reſemblance to the endemic of Savanna la Mar. The fevers of Italy, of different parts of the continent of Aſia, as deſcribed by various writers, as well as the fever of America, of which I have had perſonal experience, however obſcure their remiſſions, ſeem rather to be degenerated intermittents, than the diſeaſe deſcribed in the following pages. But that I may not be thought to inſiſt too much on this opinion, which

which few, perhaps, may conſider as of much conſequence, I ſhall relate the hiſtory of the fever of Savanna la Mar, as accurately as I can, leaving it to others to determine, whether it ſhould be conſidered as an intermittent degenerated into a remitting form, in conſequence of the greater heat of the climate, or allowed to poſſeſs ſomething characteriſtic in its own nature.

CHAP.

CHAP. II.

OF THE DIFFERENT TYPES OF PERIODICAL FEVERS.

(1) A Knowledge of the types and periods of fevers, though ſo neceſſary to be well underſtood by thoſe who pretend to cure the diſeaſe, has unfortunately been little attended to by the practitioners of Jamaica. In that country, I met with ſome who were able to foretell the returns of the ſingle tertian; but I met with none, and I have good reaſon to believe that there actually were few, who troubled themſelves about forms of greater complication. There were many, on the contrary, who, blinded by theories of accumulated bile, ridiculed altogether the idea of this ſtated regularity in the movements of nature. To enter into a diſpute with ſuch would be labour loſt. The exiſtence of a regular type in the fevers of the Weſt Indies does not admit of a doubt, yet we muſt not forget to mention, that thoſe types are traced with greater difficulty in that country, where remiſſions are obſcure, than in others, where every

every paroxyſm is uſhered in by a cold fit. In Jamaica it is impoſſible to follow them without the moſt careful attention, or perhaps to attain a clear and ſyſtematic knowledge of them, without writing down and analyzing many of thoſe caſes which occur in practice. I remember to have been impreſſed with the idea, at a very early period, that one obſervation made by myſelf would in reality be more uſeful than twenty equally important in themſelves, which I only retained in my memory from reading. Convinced of this truth I ceaſed to look for information in books, from the time that I arrived in the Weſt Indies; but, truſting wholly to my own experience, wrote down minutely, in the preſence of the ſick, the hiſtory and cure of the moſt important caſes of fever that occurred to me. At ſtated times I reviewed that which I had done, and arranged under proper heads the moſt ſtriking circumſtances, that I found recorded in my notes. Among other unexpected appearances I obſerved a regularity and order in the types of fevers, of which at firſt I had no idea, But though the laws of nature appeared to be fixed and ſtable, in producing this varied but ſtated regularity of form; yet a knowledge of thoſe laws was not eaſily attained. Two years were

were ſpent, and not fewer than a hundred caſes were analyzed, before my views of the ſubject were in any degree accurate. The labour, perhaps, was ſuperfluous; there being many authours who have deſcribed minutely every variety and every combination of type that has ever been obſerved to take place. But as I had little knowledge of the writings of others at this period, I ſhall content myſelf in the firſt place with relating the hiſtory of types as they occurred to my own obſervation; at the ſame time that I ſhall not omit to take notice occaſionally of the more conſtant peculiarities, which are found in authours of credit, who have practiſed in different countries. The influence of climate I may obſerve is of conſiderable effect in modifying the various forms.

The ſingle tertian, the period of which is forty-eight hours, is a form of fever that occurred frequently in Jamaica, particularly in the dry and healthy ſeaſon. Its courſe was eaſily traced, as the remiſſions were often diſtinct, and the acceſſions ſometimes diſtinguiſhed by a ſlight horror or ſhivering.

But though the above-mentioned type was by no means of rare occurrence at Savanna la Mar; yet the double tertian, with ſimilar paroxyſms on alternate days, was ſtill more common,

common, particularly in the rainy and ſickly months. This form of fever, which ſeemed to conſiſt of two ſingle tertians, that ran a ſeparate and independent courſe, began uſually in the morning. Its hour of invaſion was from eight to ten; and its acceſſion was generally diſtinguiſhed by a cold fit. The paroxyſm, which for the moſt part was regularly formed, declined after a continuance of eight or ten hours; and the patient remained free from fever, not only during the night, but during the following day, till four in the afternoon, or later. A feveriſh indiſpoſition uſually came on then, which continued the whole or the greateſt part of the night. A remiſſion took place; but it was ſoon ſucceeded by a paroxyſm ſimilar in its ſymptoms, and manner of attack, to the paroxyſm of the firſt day. This having declined towards evening, the patient, as formerly, was free from fever during the night, and the day following. At the uſual hour, however, or more generally before it, a paroxyſm more diſtinctly formed in all its parts, and more violent in degree, than the preceding one which correſponded with it, returned, and continued till morning. It ſubſided; and was ſoon ſucceeded by the paroxyſm of the fifth day, which declined, as formerly,

formerly, after the uſual duration. Such was the general courſe and progreſs of the diſeaſe.--The fever of the odd day, which began for the moſt part in the morning, uſually returned later and later, and with decreaſing violence every ſucceeding paroxyſm; whilſt the fever of the even day, which generally began in the afternoon or evening, as uſually returned earlier, and when this was the caſe, frequently encreaſed in force. The fever which came on in the morning generally began the diſeaſe. It was for the moſt part a fever of complete and regular paroxyſms from the firſt attack. The fever of the evening, on the contrary, was little more than an indiſpoſition in its beginning; nor was its time of appearing at all certain. It often was not perceived till the evening of the fourth day; ſometimes not till later, neither was its continuance of a fixed duration. Sometimes it went on after the fever of the morning had ceaſed; and in other caſes it terminated, while the other purſued an uninterrupted courſe,

The type, which was ſo frequent in Thaſus, and the other iſlands of the Ægean Sea, ſeems to be a ſpecies of the double tertian. Mention is made frequently of ſuch a form in the Epidemics of Hippocrates; yet the double

double tertian of Hippocrates is directly oppoſite, in ſome reſpects, to the type which I have juſt now deſcribed.--The evening fever generally began the diſeaſe in thoſe iſlands: hence the great exacerbations, and conſequently the criſes were frequently on the even days. Such alſo appears to have been ſometimes the caſe in Minorca; yet Cleghorn acknowledges, that a type, ſimilar to that which I have deſcribed as prevailing ſo commonly at Savanna la Mar, was by much the moſt frequent form of the above-mentioned iſland. It was alſo, I may add, frequent in the ſouthern provinces of North America, particularly in the hot months of ſummer and autumn.

A quotidian type has been deſcribed by almoſt every authour, who has written on the ſubject of intermitting and remitting fevers: neither can it be denied, that forms of diſeaſe frequently occur, where the paroxyſm returns every day at the ſame hour, with ſymptoms ſo nearly alike, that an ordinary obſerver can perceive no difference. Yet Mr. Senac, an authour of conſiderable eminence, boldly maintains, that a real quotidian type does not exiſt in nature. The queſtion, perhaps, is not eaſily determined. I can only mention from my own experience, that

that I have frequently ſeen fevers with quotidian exacerbations of ſuch a kind, that there was no perceivable difference between them, either in ſymptoms or in manner of attack; yet I muſt likewiſe own, that theſe exacerbations were generally in the evenings; and that the diſeaſe was not in every reſpect of a diſtinct intermitting form.

I have now mentioned thoſe types that are moſt frequently met with in the fevers of Jamaica; yet beſides theſe, there now and then occur others of more complicated and perplexing forms. Thus, I have ſometimes ſeen at Savanna la Mar, a fever, which ſeemed to be compounded of a ſingle tertian with a quotidian. In the ſpace of forty-eight hours there were three ſeparate exacerbations, two of which were ſo exactly alike, that it was impoſſible to perceive a difference; whilſt the whole three followed each other in ſuch an order of time, that to a ſuperficial obſerver, there appeared to be only one long paroxyſm of thirty-ſix hours or more. An example will make it more plain. On Monday, for inſtance, the paroxyſm of a fever was obſerved to begin about nine in the morning, preceded by ſome degree of coldneſs and ſhivering. This paroxyſm was uſually violent in its firſt attack; but declined gradually towards evening; though before it was gone

off totally, another exacerbation commenced, which continued the whole of the night. This likewiſe abated on Tueſday morning; and the patient remained apparently free from fever till five in the afternoon or later. A paroxyſm then made its appearance, ſimilar to the paroxyſm of the preceding evening. It ran over a courſe of ſimilar duration, and ſcarcely had abated on Wedneſday morning, when a paroxyſm reſembling that of Monday ſucceeded it; which, as formerly, declining towards evening, was ſoon followed by an exacerbation, that laſted till the morning of Thurſday. On Thurſday, as on Tueſday, there was no fever till late in the afternoon; when the evening exacerbation returning at the uſual hour, proceeded in its uſual courſe.

The tertian type, ſimple, or variouſly compounded is the form of fever, which prevails moſt univerſally in all climates. The quartan in thoſe countries where I have lived was rare; and the exiſtence of a real quotidian, perhaps, is doubtful. To that compound form, which I have juſt now deſcribed, I ſhould be inclined to give the name of Semitertian. (2) It is expreſsly the diſeaſe, which I now find has been deſcribed under this name by Hoffman; but it is more difficult to determine exactly, if it is the Hemitritæus of the

the ancients. (3) The Hemitritæan form is frequently mentioned by Hippocrates; but his definition is too looſe to enable us to judge preciſely of its nature. It is in fact impoſſible to ſay with certainty, whether it is to a type ſimilar to that which I have deſcribed, or to the extended and ſubintrant paroxyſms of the double tertian, that he has applied the name. (4) This laſt, indeed, ſeems to have been the idea of many of the ancients, particularly of Celſus and Agathinus.--The phyſicians of the earlier ages, were leſs curious in minute diſtinctions than their followers; and probably applied the name of Hemitritæus to thoſe fevers, the paroxyſms of which were ſimply of unuſual duration, no leſs than to thoſe that were of a complicated or compound nature. This actually appears to have been the caſe for a great length of time; but at laſt, and not long indeed before the days of Galen, the ſophiſtical genius of the profeſſors of medicine, which exerted itſelf chiefly in things of little importance, multiplied the types of fevers to an endleſs variety, and attempted to eſtabliſh diſtinctions which have no exiſtence in reality. Galen, who is copious in moſt things, has diſcuſſed very fully the ſubject of types in general, and deſcribed particularly the nature

of the Semitertian at great length. (5) But whatever credit may be otherwiſe due to the obſervations of this illuſtrious writer, it is evident that the deſcription, in the preſent inſtance, is merely the reſult of theory. (6) He has attempted, indeed, to illuſtrate his opinion by an example; but the caſe he has furniſhed us with, is conſtantly varying its hour of attack; and if accurately examined, appears rather to be a triple tertian, properly ſo called, than the form of fever that I have deſcribed above. After the Greeks we may next take a ſhort view of the Arabian phyſicians, who, as they borrowed much of their knowledge from the writings of Galen, likewiſe adopted his idea of the compound nature of the Semitertian. (7) Avicenna, the moſt eminent among them, has defined this form of diſeaſe with a good deal of preciſion; but we do not find that he has added any thing very material to the opinions of his predeceſſors. Galen, indeed, had diſcuſſed the ſubject ſo fully, that, though ſucceeding writers ſometimes changed names, they do not ſeem in reality to have furniſhed much new obſervation. As we deſcend to leſs remote times, Hoffman and Cleghorn are the moſt accurate of the moderns, on this ſubject, who have yet come to my hands. (8) The former deſcribes under the

the name of Semitertian the expreſs form of diſeaſe, that I met with in Jamaica; the latter refers this title to the extended and ſubintrant paroxyſms of the double tertian. It is with unwillingneſs that I differ in opinion from Cleghorn, who has thrown more light on the hiſtory of periodical fevers, than perhaps, all the writers of his time: yet I cannot help obſerving, that I never recollect to have met with an original Semitertian, ſuch as that he has deſcribed in his well-known treatiſe. (9) I muſt own, indeed, that I have ſeveral times ſeen the morning fever of the double tertian anticipate, ſo as to be mixed with the decline of the paroxyſm of the preceding evening; thereby producing a form of diſeaſe, that could only be diſtinguiſhed, by the moſt careful attention, from one long paroxyſm of thirty hours or more: yet this was in fact, only a degenerated double tertian, the paroxyſms of which became accidentally mixed with each other.

The types which I have deſcribed above are all the varieties, that I obſerved in the fevers of the Weſt Indies; yet more extenſive experience might have, perhaps, brought to my knowledge ſtill further complications: for beſides the forms mentioned in the preceding pages, I had the opportu-

nity, in the ſouthern provinces of North America, to ſee ſeveral inſtances of the triple tertian, properly ſo called. In forty eight hours there were three ſeparate paroxyſms; all of them differing from each other, but correſponding with others that followed.--- They were eaſily traced, as the acceſſions in that climate were uſually diſtinguiſhed by a cold fit. In Jamaica, on the contrary, complications and irregularities were marked with difficulty. The anticipation of type among other things occaſioned conſiderable perplexity. Thus the ſingle tertian, whoſe regular period is forty-eight hours, often completed its revolutions in forty-ſix. But though the paroxyſms frequently returned one hour or even two hours ſooner than the uſual time; yet theſe anticipations were ſeldom longer, unleſs the diſeaſe was of a malignant nature, or diſpoſed to change to a continued form. In either of theſe caſes anticipations of twelve or fourteen hours were not uncommon. Of the different forms of fever the anticipations of the ſingle tertian were the longeſt and moſt remarkable. It was obſerved, indeed, that the evening paroxyſm of the double tertian very generally returned before the uſual hour; yet this return was ſeldom more than an hour at once; nor

nor did the time of invaſion in the whole courſe of the diſeaſe, ſo far as I have obſerved, ever go beyond twelve at noon. The morning paroxyſm, on the contrary, frequently poſtponed; yet I have likewiſe obſerved it ſometimes to anticipate ſix or eight hours at one time; by which means, it encroached on the paroxyſm of the preceding evening, and produced the diſeaſe which Cleghorn has diſtinguiſhed by the name of Semitertian. (10) The obſervation of this fact does not ſeem to have eſcaped Avicenna.

There undoubtedly are accidental circumſtances, which have ſome effect in accelerating or retarding the return of the paroxyſm for a ſhort ſpace of time; yet it would appear upon the whole, that the cauſe, why a fever anticipates or poſtpones, depends upon ſomething that is peculiar to the particular nature of the diſeaſe. Thus, a fever, which once begins to anticipate, generally goes on anticipating through a great part of its courſe; a certain proportion being frequently preſerved between the anticipations of the different paroxyſms. This was particularly the caſe in the ſingle tertian of America. The paroxyſms of the fevers of that country often anticipated to a certain point, by ſhort anticipations, which bore a regular proportion to

each other; whilſt they were ſometimes likewiſe obſerved to poſtpone, in the ſame gradual manner, towards the termination. This ſeldom happened in the fevers of the Weſt Indies.

The anticipations I have mentioned often occaſion perplexity in tracing the types of fevers; yet the complications which ariſe in the progreſs of the diſeaſe, have a ſtill more conſiderable effect in embarraſſing the appearances of regularity. Fevers which begin as ſingle tertian, often continue ſuch through the whole of their courſe; yet it ſometimes likewiſe happens, that complicating fevers make their appearance on the even days for inſtance, and continue longer, or terminate ſooner than the original complaint, in ſuch manner, as if their exiſtence no way depended on it. To be able to diſtinguiſh thoſe complications from the anticipations of a ſingle type is frequently very uſeful, and a knowledge of it may, in general, be attained with a good deal of certainty. Thus for inſtance, if the diſeaſe is moderate in its ſymptoms, and without ſuſpicion of malignity, the appearance of a paroxyſm twelve or fourteen hours before the uſual time, eſpecially if there is no material difference in the nature of the ſymptoms, gives reaſon to ſuſpect that the premature

ture return is in reality the complication of another fever. On the contrary, where the diſeaſe has betrayed ſigns of malignity, or where the ſymptoms differ from thoſe of the former paroxyſms only in a greater degree of violence, there is then reaſon to apprehend that this appearance is only an anticipation. On the ſubject of complication of type, ſome curious obſervations may be found in the writings of (11) Galen and (12) Avicenna. The opinions of thoſe authors, indeed, are often mixed with whimſical theories; yet in many reſpects they are fundamentally true, and highly intereſting.

It would be a matter of ſome utility could we learn to foretell, from the nature of the types, the accidents that are likely to happen in the progreſs of the diſeaſe, or to form a probable conjecture of the event. Something certainly may be gained if we obſerve with attention. Thus I may remark, that I never found anticipations of one hour or even two to be of much conſequence in the fevers of Jamaica, particularly if they happened at an early period; yet if they were longer, or did not happen till after a long continuance of the diſeaſe, they (13) often indicated an approaching criſis. On the contrary, where the paroxyſm anticipated twelve or fourteen hours

hours at one time, there was always ſuſpicion of danger, at whatever period this might happen. It either indicated danger and malignity, or a diſpoſition in the fever to change to a continued form. Anticipating fevers were likewiſe obſerved to be more diſpoſed to terminate of themſelves, and likewiſe to terminate more ſpeedily, than thoſe which ſteadily preſerved the ſame hour of return. This ſeems to have been known to the ancients.--- But farther, as anticipating types are generally a ſign of increaſing violence, though of a more ſpeedy termination; ſo the poſtponing of the paroxyſm, has uſually been allowed to indicate a diſeaſe, whoſe violence has begun to decline. Such is the common obſervation: nor have I ever found it to be otherwiſe; unleſs in ſome caſes of weakneſs and impaired ſenſibility, where the fatal paroxyſm did not come on till after the uſual hour of attack.

I am afraid I may appear to many as unneceſſarily minute, on a ſubject, which is not in general conſidered as of much importance; yet ſtill I cannot forbear to mention ſome circumſtances of connection, between the hour of invaſion and the future type of the fever, which appear to be not only curious, but uſeful; and which, ſo far as I know, have not been taken notice of by any preceding writer.

Galen,

(14) Galen, it is true, boaſts the knowledge of foretelling, from the appearance of the firſt paroxyſm, the nature of the future type of the diſeaſe; yet the hour of invaſion is not included among the number of thoſe ſigns, from which he has drawn his information.---(15) The rules, indeed, which he has left us are not altogether without foundation; yet they are by no means to be depended on alone. They have, in fact, ariſen from theories of bile and phlegm, rather than from accurate and careful obſervation. There is not, perhaps, any one criterion on this ſubject that applies equally in every climate. Thoſe rules, which I thought I had diſcovered, are only local. They varied in the different parts of Jamaica, and in moſt parts of America did not apply in any degree. Having adopted, on my arrival in the Weſt Indies, the method of writing down and analyzing ſuch caſes of fever as came under my care, the difference of hour, at which fevers of a different type uſually commenced, ſtruck me as a matter of no ſmall curioſity. (16) The ſingle tertian, for inſtance, was conſtantly remarked to begin in the forenoon, uſually between the hours of eight and eleven; whilſt thoſe forms of diſeaſe, that were evidently quotidian, or ſtill more continued, as conſtantly

ſtantly began in the evening, generally from four to eight. This ſeemed to be a fixed diſtinction; it is an important one; and ſo far there was no ambiguity: but it was extremely difficult, perhaps impoſſible, to diſcover ſigns at an early period, which were capable of diſtinguiſhing the fever, which continued ſimple in its form throughout, or which became complicated at a certain period of its courſe. I have often made a fortunate conjecture; but I believe it would occaſion embarraſſment, rather than afford information, were I to attempt to deſcribe thoſe circumſtances, which ſometimes determined my opinion. They muſt, in fact, be learnt from actual obſervation. I have juſt now mentioned, that it is extremely difficult to diſtinguiſh the ſingle from the double tertian, by the appearances of the firſt paroxyſm, when the morning fever of this laſt form begins the diſeaſe; ſo neither is it eaſy to diſtinguiſh the double tertian from the quotidian, when the illneſs commences with the evening paroxyſm of that complicated type. This is a caſe, indeed, which as far as my experience goes, rarely happens; yet where it does happen, the circumſtances, with which the evening fever is uſually attended, mark a further diſtinction. The quotidian commences uſually by a diſtinct

tinct and regular paroxyſm; the evening fever of the double tertian, for the moſt part, only by a ſlight indiſpoſition.

This connexion which I have juſt mentioned, between the hour of invaſion and the type of the fever, was obſerved conſtantly at Savanna la Mar in Jamaica; but the ſame rules did not by any means hold true in the different parts of the continent of America. The moſt uſual hour of the invaſion of the ſingle tertian was twelve at noon in that country; though in ſome caſes the paroxyſm came on ſo early as ten in the morning, or ſo late as two in the afternoon. Of the other forms I cannot ſpeak with any certainty.

But beſides the different hour of invaſion of the different types, I muſt likewiſe take notice of ſome other circumſtances, that ſeemed to be connected with the various forms. The duration of the paroxyſm for inſtance, was uſually longer in the ſingle tertian than in the double tertian, or quotidian; and of the double tertian, the paroxyſm of the morning was uſually longer than that of the evening; and beſides being longer, was generally of greater violence, at leaſt in the beginning of the diſeaſe. The cold fit was likewiſe more remarkable in the ſingle tertian, than in the other forms of fever.---I do not

not ſpeak of the quartan, of which I know but little. Of the bilious vomiting, ſo much inſiſted on by Galen as a diſtinguiſhing mark of the ſingle tertian, I am at a loſs to ſpeak poſitively. I can, indeed, affirm, that I conſtantly obſerved ſuch evacuations to be more frequent in the different forms of the tertian, than in thoſe that appeared to be quotidian, or that approached nearer to a continued type.

Such were the types of the fever of Jamaica, and ſuch were the principal circumſtances that appeared to be connected with them. The types of fevers it may be obſerved ſeem to be modified by climate; and there are not perhaps two different countries, or even diſtricts of country, in which they are exactly alike. The hour of invaſion of the ſame form of diſeaſe was different in Jamaica, and on the continent of North America: neither does it appear to have been exactly the ſame in Jamaica, and in the different iſlands of the Mediterranean. The prevalence of certain forms in certain climates, and the various changes of the form according to the changes of the ſeaſon, is a matter of curioſity, and of conſiderable importance in the hiſtory of the diſeaſe. In Jamaica for inſtance, for one ſingle tertian, there were at leaſt

leaſt three double ones; whilſt in America, the ſingle tertian bore the proportion of ten to one, perhaps, to all the other forms. In the higher latitudes of this country, the ſingle tertian was almoſt the only form which was ſeen, in the winter months and in ſpring; yet in the ſouthern provinces, particularly in the heat of ſummer, and ſometimes in autumn, the double tertian, and even ſtill more complicated types were by no means uncommon.

I have thus endeavoured in the preceding pages to deſcribe the types of remitting fevers, as they occured to my own obſervation. I have likewiſe attempted to compare my own deſcriptions with thoſe of other authors; ſo that the reader may, in ſome degree, be able to attain a ſyſtematic view of this ſpecies of diſeaſe, as it appears in the different parts of the world. The labour I am aware will be reckoned ſuperfluous by many; and a diſcuſſion on types, will probably be conſidered as partaking too much of the ſchool of Galen, who is held in contempt by the writers of the preſent day. I by no means contend for the infallibility of Galen or the ancients; yet I cannot help believing, that though they have left us much falſe and ſuperfluous theory, they have likewiſe left us many valuable obſervations,

tions, on the nature and progreſs of febrile diſeaſes, which the moderns ſeem to have neglected. Though the theory of Galen on the preſent ſubject is probably ill founded, his obſervations are certainly exact; and from what I have myſelf ſeen, no aſſertions, which will convince me, that an intimate acquaintance with the types and periods of fevers, is not an eſſential knowledge to the practitioner. It is, indeed, the firſt ſtep; and it is a ſtep of ſuch importance, that our future progreſs will neither be ſatisfactory nor ſafe, unleſs it is properly underſtood. I may be allowed to ſpeak from my own experience. It fell to my lot to have the charge of men's lives at an early period of life. I had then no knowledge of the types and periods of febrile diſeaſes, and I muſt not conceal, that the method of treatment I purſued, and the returns of the diſeaſe ſo often interfered, that though actual harm was ſeldom done, yet many opportunities of doing good were certainly loſt. The patient, if he had the leaſt penetration, could not ſometimes, avoid ſeeing, that, though I might be acquainted with the common routine of practice, I was ignorant of the nature and progreſs of the diſeaſe, from which I had undertaken to relieve him.

CHAP.

CHAP. III.

CRITICAL DAYS IN FEVERS.

THE critical days, which are intimately connected with the types and periods of fevers, come properly to be conſidered in this place. The ſubject is important, and though very fully diſcuſſed by medical writers, does not as yet appear to have been ſatisfactorily explained by any one. If we attempt to trace the doctrine to its ſource, we ſhall find the firſt mention of it in the writings of Hippocrates. The followers of this authour's opinions are numerous; and the endeavours, they have employed in attempting to eſtabliſh his ſyſtem, have been ſtrenuous and unremitting. But critical days have unfortunately afforded a field for controverſy in all ages; and there ſtill are many who maintain, and others who as confidently deny the exiſtence of any ſuch power in affecting the termination of febrile diſeaſes. In the midſt of this perplexity, a man who has had no experience of his own is totally at a loſs, which way to turn. There are great names on both

ſides of the queſtion, but clear and deciſive evidence on neither. A detail, therefore, of ſuch obſervations, as promiſe to remove many of thoſe circumſtances of embarraſſment, cannot fail of being uſeful, and I hope acceptable to the public. I am aware, indeed, that an attempt to explain a myſtery, which has hitherto eluded the reſearches of the moſt eminent phyſicians, will not probably eſcape cenſure:--In an obſcure man, perhaps, it may be deemed arrogant: neither is it altogether without heſitation, that I undertake the diſcuſſion; though very unequivocal proofs of the truth of the principles on which I proceed, ariſe from a view of the caſes of fever which came under my care, during the time I lived in the Weſt Indies. The principle, on which the critical days in that climate depend, appears from the facts found in the following pages to be indiſputably eſtabliſhed; the deviations are ſatisfactorily accounted for; and the fundamental rules, it is preſumed, are ſuch as may be extended to every climate on the globe. But, I ſhall ſtate in a few words the leading circumſtances, which have occurred to me on the ſubject. If they afford not light enough to remove all the difficulties, it is hoped they may at leaſt point out a road,

road, by which theſe difficulties may in future be removed.

It may not be improper to remark in the firſt place, that I had heard of the doctrine of critical days in fevers before my arrival in the Weſt Indies; yet I may likewiſe obſerve, that it was a doctrine, which I had only heard of by name. I had no knowledge of it, and I ſoon found that the idea was treated with ridicule by practitioners, who very generally ſuppoſed the courſe of the fevers of Jamaica to be cut ſhort by bark, or other powerful means. Influenced, perhaps, by the authority of older men, I found myſelf diſpoſed to acquieſce in the common opinion, that this doctrine was only one of the fanciful theories of the ſchools; yet it was not long before I acquired a different view of the ſubject. I ſoon obſerved that fevers ſometimes ceaſed before a ſingle grain of bark was given; ſometimes after a few doſes, and ſometimes not till after ſeveral ounces. The obſervation of this fact did not fail to undeceive me. Under the circumſtances I mention, it would have been the height of obſtinacy to have perſiſted in believing, that the cure of the fever was in reality owing to the power of this celebrated remedy. But though it was ſoon evident, that the termination of the diſeaſe

depended on ſome other thing than that which was generally ſuppoſed; yet a conſiderable time paſt over, before I was able to determine what this ſomething actually was, or before I was able to aſcertain the laws which it obeyed. I ſoon diſcovered, indeed, that fevers had a general tendency to terminate on particular days; but it was not till the year 1776, that I diſcovered the proportion thoſe days bore to each other, or the ſources of the many deviations, which occurred. The ſubject ſeemed to be important;--and I felt an eagerneſs to determine a queſtion, which hitherto had been fruitleſsly purſued. With this view I wrote down with care and attention every caſe of fever which I met with in the years 1776 and 1777; and in looking over the memoranda ſometime after, found, that the critical days bore to each other the following proportion: viz. of ſixty caſes, which terminated favourably, ten terminated on the third, ten on the fifth, twenty on the ſeventh, ten on the ninth, five on the eleventh, three on the thirteenth, and two on the ſeventeenth. Of nine which terminated fatally, one terminated on the ſixth, one on the ſeventh, ſix on the eighth, and one on the tenth. Theſe facts are preciſe and determinate; but I muſt not forget to mention,

mention, that if we are guided wholly by obvious appearances, there ſometimes occur circumſtances, which occaſion embarraſſment. Thus in the preſent inſtances, I not only reckoned the time by the periods, or revolutions of the diſeaſe, but I likewiſe ſimplified the complicated types; that is, I reckoned every revolution of the ſingle tertian as forty-eight hours, though it was often compleated in leſs; whilſt I conſidered the correſponding paroxyſms of the double tertian, only as the ſame diſeaſe. It may alſo be farther remarked, that the diſeaſe, which was the ſubject of this inveſtigation, was of a regular, remitting form. Paroxyſms and remiſſions were always diſcernible, and ſigns of criſis were generally diſtinct.

The ſtate of the critical days, as repreſented above is literally exact, where the complicated types were ſimplified, and where the time was reckoned by the periods of the diſeaſe; but I muſt likewiſe obſerve, that unleſs this method of calculation was adopted, there occurred numerous inſtances, which ſeemed to deviate from the general rule. In the firſt place, if the type of the fever was ſingle tertian, which neither anticipated nor poſtponed,--and with paroxyſms which did not exceed twelve hours in duration, the

criſis was uniformly on an odd day: yet if the type anticipated, and the ſum of the anticipations, in the courſe of the diſeaſe, was equal to twenty-four hours, the criſis was then neceſſarily removed to an even day, if the time was reckoned by the natural day; though ſtill on an odd day, if reckoned in the manner which has been mentioned above. In like manner, if the type poſtponed, while the duration of the paroxyſm exceeded or amounted to twenty-four hours, the criſis was neceſſarily protracted to an even day. But this was a caſe, which ſeldom happened. In fevers likewiſe of the double tertian type, the type which prevailed principally at Savanna la Mar, there occurred much ſeeming irregularity. This form of fever, as was ſaid before, ſeemed to conſiſt of two diſeaſes, which ran a ſeparate and independent courſe. Thus, if the fever which began on the odd day was critical; that is, if the paroxyſm of the odd day terminated the diſeaſe, the criſis was neceſſarily on an odd day; but if that fever, the firſt attack of which was on the even day, conſiſted of an equal number of paroxyſms with the other, or continued after that had ceaſed, the criſis was then on an even day, reckoning from the beginning of the illneſs, though ſtill on an odd day, dating from the

the commencement of the ſecond fever. It was the obſervation of this fact which firſt gave me the idea of ſimplifying complicated types, and of calculating the critical days by the periods of the diſeaſe. The idea may perhaps be reckoned fanciful; but experience has afforded me ſufficient proofs, and it will ſtill afford the ſame to thoſe who take the trouble to look for them, that the various types of complicated fevers actually run a ſeparate and independent courſe; a fact when eſtabliſhed, which removes all doubt and ambiguity from the apparently varying laws of critical days in the compound forms of febrile diſeaſes. With regard to the quotidian it remains to be remarked, that the criſis was generally on an odd day. It was likewiſe generally on an odd day in thoſe that were ſtill more continued and acute;--a fact which ſeems to have been well known to Avicenna. But though the rules I have mentioned are clear and uniform, I muſt ſtill own, that I have ſometimes met with fevers of a very continued kind, which terminated late on the ſixth, or rather very early on the ſeventh. The diſeaſe was then of more than uſual violence on the ſixth:--how far this might be owing to anticipation of the paroxyſm of the ſeventh, accumulated upon

that of the ſixth, is difficult to determine with certainty.

The anticipation, the poſtponing, and the complication of type are the principal circumſtances, which uſually diſturb the regular critical periods in fevers of ſhort duration; yet in thoſe of longer continuance, there is ſtill another cauſe, which deſerves to be particularly attended to. In the fevers of Jamaica, eſpecially in thoſe which approached to a continued form, ſome very apparent change in the nature of the ſymptoms, or in the mode of action of the febrile cauſe, was generally obſerved on the ſeventh, or before it. In conſequence of this change, the order of the critical days was ſometimes diſturbed, and appearances were often produced, which ſeemed to contradict the rules, which we have attempted to eſtabliſh. It was a common remark, that after the ſeventh there was leſs apparent regularity in the movements of nature. This, as we ſhall afterwards attempt to prove, was the conſequence of a ſeptenary revolution, which accidentally diſturbed the regular order of the ordinary days of criſis. It is a fact of which the ancients were not ignorant; and of which I ſhall have occaſion to make frequent uſe: viz. (1) that a relapſe has a tendency to run over a courſe of

of duration equal to the original fever. This is confirmed by the authority of Hippocrates; but I may alſo add, that not only thoſe recurrences of fever, which are more properly ſtyled relapſes; but further, that in thoſe inſtances, where the diſeaſe undergoes any remarkable change in the nature of its ſymptoms, the diſorder is generally diſpoſed to continue for the ſame length of time in this new form, as it had done in the former. Thus a remarkable change of ſymptoms on the fifth was followed by a criſis on the ninth; ſometimes, perhaps, only by another change of ſymptoms on the ninth, the final criſis not happening till after another period of five days. In like manner, a change of ſymptoms on the ſeventh was often followed by a criſis on the thirteenth; or only, perhaps, by another change on the thirteenth, the diſeaſe completing another revolution of ſeven days before a final termination. That ſuch changes actually do take place at certain periods, not only thoſe caſes of fever, which have come under my own care, but thoſe related by Hippocrates, in the books of Epidemics, give ſufficient room to believe. Thus in every one of thoſe inſtances, where the hiſtory is ſo circumſtantially detailed as to leave it in our power to trace the diſeaſe in its

its progreſs, it will conſtantly be found, if the day of criſis deviates from the general rule, that a change of ſymptoms, often an evident renewal of fever, had actually taken place at ſome period of the courſe. In this manner, if the change of ſymptoms of which I ſpeak happened on an odd day, the odd days continued to be critical, as if no change had been; on the contrary, if the paroxyſm of the odd day completed its courſe, the remiſſion which followed was often more perfect than uſual:--a diſtinct period was marked in the hiſtory of the diſeaſe,--or in other words, there was an obſcure or imperfect criſis. But on the day following, which was an even day, a fever with a different train of ſymptoms made its appearance, and ran over a courſe, for the moſt part, equal in duration to the former. If this change, or renewal of the diſeaſe happened on the ſixth, a change or criſis was not expected till the tenth, if on the eighth, not till the fourteenth. I have ſaid juſt now, that relapſes were generally diſpoſed to run over a courſe of the ſame duration as the original diſeaſe; yet I muſt likewiſe remark, that they were ſometimes alſo of ſhorter continuance. Thus I have frequently obſerved a change of the nature of the ſymptoms on the ſeventh, and a final criſis

on the eleventh; the renewal of the , inſtead of ſeven, being only of five ontinuance.

e above circumſtances are capable of ex- ig the ordinary deviations from the re- critical periods, in the fevers of the Indies; but I cannot affirm with the certainty, that a ſimilar explanation will inſtantly admitted in the long fevers of ountry. I have however reaſon to be- that changes at the ſeptenary periods ntly take place here, and ſometimes ntly diſturb the critical periods of the a. Thoſe caſes which I have been able ce with accuracy give ſtrong proofs of I ſhall relate two or three of them to as an illuſtration. The firſt, is that of ig man, who had been ill of a fever more three weeks before I was called to him. days before I ſaw him; and after an it abatement of the ſymptoms, there ned a ſudden and unexpected relapſe, ewal of the diſeaſe. Informed of this nſtance, I dated from the new attack, alculated the critical days in the manner a has been ſhewn above. Minute at- n diſcovered the type, though it was n obſcure one.--It was Semitertian, or was an exacerbation every evening, with

with a more evident paroxyſm on the alternate days. A criſis happened at the period I had foreſeen; but it was not final. A fever returned again in the evening, different however in type, as well as in ſymptoms, from the preceding. It had diſtinct quotidian exacerbations, and an imperfect criſis happened on the ſeventh. But in twelve or fourteen hours, a coldneſs and ſhivering marked a renewal of the old, or perhaps the invaſion of a new diſeaſe. The ſymptoms were not only different in their nature from the ſymptoms of the former; but they were likewiſe more violent in degree. The diſeaſe continued in this form for ſeven days, and the criſis, which at laſt was only imperfect, was ſoon ſucceeded by another renewal of fever, the beginning of which was marked by a ſimilar degree of coldneſs and ſhivering. The ſymptoms of this were likewiſe different from the preceding, but its form was the ſame, and it ran over a courſe of equal duration. The ſeptenary revolutions were very plain in this caſe. I ſhall relate another in which they were not ſo clearly marked, though they certainly did ſtill take place. It is a caſe of fever with nervous ſymptoms. On the ſeventh a ſediment appeared in the urine, ſome drops of blood fell from the noſe; and the abatement

ment of fever was very evident; yet it did not laſt long. The diſeaſe recurred again on the eighth, and continued to increaſe in violence till the fourteenth. A ſediment then appeared in the urine, ſome drops of blood fell from the noſe as before, there were two or three evacuations by ſtool, which had been unuſual in the preceding courſe of the diſeaſe; and from the whole appearances I could not help entertaining ſome faint hopes of criſis. There was indeed an evident alleviation of the ſufferings; but it laſted but for a ſhort time. Next day every ſymptom was aggravated, and the powers of life ſeemed to ſuffer a gradual diminution till the twentieth, when the patient died. I do not recollect any inſtance of fever, where the revolutions were more obſcure than in the preſent caſe; yet they were ſtill capable of being traced. The next example I ſhall mention is much clearer. It is an inſtance of a bad fever, of no diſcernible type in the beginning, in a man who was conſiderably advanced in years. On the evening of the ſeventh there was ſome obſcure tendency to criſis. The patient was not only eaſier in his own feelings; but the eye and countenance, which had been confuſed and clouded, brightened up, and a ſmall ſediment appeared in the urine. Yet theſe favour-

favourable circumſtances were only of ſhort duration. In the courſe of the day following all the ſymptoms recurred, and the diſeaſe acquired force till the evening of the thirteenth. The pulſe then began to riſe, and continued riſing till the morning of the fourteenth, when a profuſe ſweat was followed by a very diſtinct criſis. But ſtill this criſis was not final. The malignity of the diſeaſe, however, departed, and the complaint that remained, aſſuming a remitting form, totally diſappeared after another period of ſeven days. I ſhall only beg leave to relate another inſtance of fever, which occurred to me lately, and which affords a very curious proof of ſeptenary revolutions in febrile diſeaſes of long continuance. A young man had been ill of a fever about a fortnight before I was called to him. At the time I firſt ſaw him, the ſymptoms were very violent; but having abated conſiderably in the courſe of a day or two, I began to entertain hopes of a ſpeedy recovery. The complaint was almoſt entirely gone, when a new train of ſymptoms unexpectedly making its appearance, raged with violence for a day or two, and then declined gradually as the other had done. I again looked for ſigns of criſis, when another acceſſion on the ſeventh from the former attack, brought matters into ſtill greater

greater danger. Theſe ſymptoms, though of a different nature from the former, were violent in the beginning; but they ſoon began to abate, and had almoſt diſappeared, when the attack was once more renewed on the following ſeventh. In this manner the diſeaſe went through nine ſeptenary revolutions: and it is ſomewhat remarkable, that the ſymptoms, which marked the new acceſſion, were always different from thoſe of the acceſſion immediately preceding. In one the diſtinguiſhing ſymptoms were a moroſe and ſtern ſullenneſs, in another, delirium, tremors and ſubſultus tendinum,--and in the third, copious liver-coloured ſtools. Theſe were three times ſeverally repeated. It deſerves, however, to be remarked, that the period of the acceſſions was ſhortened before the termination of the diſeaſe. After it had continued nine weeks in the manner I have deſcribed above, there were two acceſſions of five days each; after which all traces of fever diſappeared.

It is ſufficiently plain from the facts which I have mentioned in the preceding pages, that the more uſual irregularities in the order of the critical days, proceed generally from overlooking the type in periodical fevers, or from neglecting to attend to ſeptenary, and other revo-

revolutions, in ſuch as approach more nearly to a continued form. Theſe are the general cauſes of apparent irregularity; yet beſides theſe, there are ſtill ſome others, which muſt not be paſſed over without notice, as they occaſionally have the effect of producing apparent deviations. Thus it often happens, that a diſeaſe, which appears to be continued in the beginning, changes to remitting after a certain duration. The change is uſually on an odd day, and on the day following the firſt paroxyſm of the remitting form makes its appearance, the termination of which may be expected on an even day, if we date from the beginning of the illneſs, though ſtill on an odd day, if we date, (as perhaps we ought to do) from the time this change in the circumſtances of the diſeaſe took place. To this we may add, that thoſe complicating fevers, which, happening at various diſtances of time, ſometimes terminate ſooner, ſometimes continue longer than the original complaint, frequently diſturb in appearance the general regularity of the critical periods of nature. It happens, perhaps, from a ſimilar cauſe, that a paroxyſm of an unuſual kind ſometimes terminates the diſeaſe, and apparently diſturbs the regular periods of criſis. This has occurred to me ſeveral times in practice;

tice; and it happened twice in my own perſon. The ordinary paroxyſm declined after the uſual duration: a new one ſucceeded of uncommon violence, and very different in its nature from the former. Its courſe was of long continuance, and it finally terminated the diſeaſe.

The above facts enable us to explain ſatisfactorily every circumſtance, which relates to critical days in fevers, where the criſis is clear and decided; yet I muſt ſtill own, that as I have ſometimes met with fevers where marks of criſis were ſcarcely perceptible; ſo it would be raſhneſs, in ſuch caſes, to ſpeak poſitively of the order of the critical days. The patient might, in ſome meaſure, be ſaid to wade through the diſeaſe; the changes from day to day being ſo very ſmall, that it required more diſcernment than I can boaſt of to mark them with preciſion.

The obſervations I have related, and the rules I have attempted to eſtabliſh, for the better explanation of the doctrine of critical days in fevers, were formed at a time when I had no knowledge of the opinions of preceding authours. They may therefore better claim exemption from bias in favour of one ſet of writers, or prejudice againſt another. They are indeed no more than an analyſis of

facts, which were collected with every poſſible care, which are ſufficiently circumſtantial, and which ſpeak beſt for themſelves. They contain, (if I do not view them with a partial eye,) ſuch information, as may lead to a ſatisfactory explanation of this myſterious and long diſputed doctrine.---I muſt only beg leave to add, that though I have everywhere mentioned the pre-eminence of particular days in terminating fevers; yet it muſt not be underſtood, that this power depends on a particular quality of the days, merely as ſuch. It depends more evidently on a certain number of revolutions of the diſeaſe, in conſequence of which, the fever from ſomething we do not in the leaſt underſtand, ſeems diſpoſed to terminate finally, or to ſuffer a change in its mode of action. This therefore brings us to the concluſion, that the critical periods are improperly calculated by the natural day. The doctrine, in ſhort, can only be rendered conſiſtent by attending to the periods of the diſeaſe, by ſimplifying complicated types, and by marking thoſe ſeptenary or other revolutions, which happening at different diſtances of time, occaſion an appearance of irregularity which does not exiſt in reality.

Having related the reſult of my own obſervations on critical days in fevers, I ſhall now

now endeavour to bring under one point of view, the ſubſtance of what has been written on the ſubject, by ſome of the moſt celebrated of the ancient, as well as modern phyſicians. That certain days, or that portions of time comprehended in a certain number of days, had obviouſly a power of producing changes on the human frame, appears to be an obſervation of high antiquity; but as a medical doctrine, we are unable to trace it farther than the days of Hippocrates. Hippocrates has treated very fully of the critical periods of fevers, in various parts of his works; and upon the whole, has amaſſed a conſiderable body of information; though with leſs preciſion, perhaps, than has been generally imagined. The caſes of the Epidemics, which we naturally conſider as the materials from which he formed his general doctrine, have ſome obvious and great defects. The date is ſeldom clearly aſcertained, and the mode of calculating the time, does not ſeem to be fixed. If a fever, for inſtance, begins in the evening, or in the courſe of the night, the day following is generally reckoned the firſt day of the diſeaſe, by this authour.--But this is not all.--Some of the caſes are plainly related from memory; and others are only parts of caſes, related by different perſons. This

want of accuracy, where it is ſcarcely poſſible to be too circumſtantial, neceſſarily breeds confuſion, and produces an appearance of irregularity, which does not actually exiſt. Hence we find inconſiſtency in the general doctrine, as delivered in different parts of the works, which have been aſcribed to Hippocrates; at the ſame time, that there is a want of that circumſtantial detail in the particular parts, from which only we can be enabled to form an opinion. I have read over with much attention the caſes of fevers, recorded in the Epidemics; but I frequently found myſelf unable to trace the diſeaſe in its progreſs. Though evidently ſubject to periodical movements, it was not always in my power to lay hold of the type; yet wherever it was poſſible to attain this exactneſs, I have the ſatisfaction to add, that I conſtantly found the movements of nature to be uniform. They were the ſame in the iſlands of the Archipelago, as in the iſland of Jamaica.--If they appeared in ſome inſtances to be different, it was perhaps principally owing to this, that the Greek phyſician had left ſome part of the diſeaſe undeſcribed.

From what I have juſt now ſaid, we can have no heſitation in concluding, that the opinion of Hippocrates, on the ſubject of critical

critical days, is neither preciſe in any one part, nor conſiſtent in the whole. The doctrine, however, in its beſt digeſted form, is the following: viz. (2) That odd days have a remarkable power in terminating fevers; but more particularly, that the great critical revolutions happen at quaternary periods. Thus, the moſt eminent critical days, are the fourth, the ſeventh, the eleventh, the fourteenth, the ſeventeenth and twentieth. This is the general form of this Hippocratic doctrine; yet in this form, it bears contradiction to obſervations that are found in various parts of that ancient authour's works. The fifth and ninth are excluded by this arrangement, from the number of the critical days; though there are numerous examples of their great power, in terminating febrile diſeaſes.

The doctrine of critical days, which appeared firſt in a regular form, in the writings of Hippocrates, found numerous and reſpectable advocates among the ancient phyſicians. Diocles of Caryſtus, Philotimus, Heraclides of Tarentum, &c. all bore teſtimony to the general truth of the obſervation; but their writings being unfortunately loſt, we are now ignorant of the particular facts and arguments, by which they attempted to ſupport their opinions. Indeed, from the time of the

Perſian invaſion of Greece, till the Roman arms penetrated into Aſia, a period of near four hundred years, we know of no oppoſition to this fundamental doctrine of the Coan Sage: But in the time of Pompey the Great, an authour aroſe, who endeavoured to eſtabliſh his own fame on the ruins of this favourite ſyſtem of his predeceſſors. (3) Aſclepiades, who was a man of a bold and daring genius, not only rejected this apparently well founded doctrine of the ancients, but treated the idea of it with ridicule. His arguments are ingenious and acute; but they fall ſhort of the truth. The paroxyſms or exacerbations, as he juſtly obſerves, ſometimes change to the even days, and conſequently the criſis: yet this, if properly underſtood, does not deſtroy the generality of the rules;--if the method of calculating the time, by the periods and revolutions of the diſeaſe, be adopted, the difficulty is perfectly removed. But though this fact in reality, was not unknown to Aſclepiades; yet it does not appear, that he underſtood the application of it. I may add, that he has precipitately rejected the doctrine, from the very circumſtance which eſtabliſhes its reality.

We do not meet with any thing very material, on the preſent ſubject, between the time

time of Aſclepiades, and the days of Galen. There appears, indeed, to have been many, who adopting the opinion, and copying the arguments of the eloquent Bethynian, denied altogether the exiſtence of critical periods in fevers; whilſt others, recurring to the doctrine of Hippocrates, maintained their reality with no leſs obſtinacy. But we are now in a great meaſure ignorant, if thoſe writers attempted to ſupport their opinions by any new facts, or new arguments. Among other misfortunes, we muſt regret particularly, that the treatiſe of Aretæus on fevers is loſt. From what we know of this authour's induſtry, we might have reaſonably expected original information on the ſubject in queſtion.

Galen, whoſe fertile and exuberant genius left no path in phyſic unexplored, has written fully on this celebrated doctrine. He has profeſſedly adopted the opinion of Hippocrates, and laboured much to explain and confirm it; but unfortunately, he has oftener overwhelmed the ſubject with diffuſe and tedious reaſonings, than illuſtrated it by proofs from experience and actual obſervation. (4) Upon the whole, however, amidſt much ſuperfluous and unmeanning matter, we find not only uſeful information, but a more ſyſtematic arrangement of facts, than is any

where to be met with. He has attempted to fix with more preciſion the date of invaſion; he has eſtimated with more accuracy the critical power of the different days; and further, has hinted obſcurely, that the time will be calculated moſt conveniently by the paroxyſms or revolutions of the diſeaſe. In ſhort, this authour, no leſs than Aſclepiades, was ſufficiently acquainted with the principal truths, which give conſiſtency to this doctrine; but it is evident, that he did not underſtand the full extent of their application. He was conſtantly biaſſed by the theory of a quaternary period; as without this predilection, it is not eaſy to conceive, how he ſhould have conſidered the fourteenth, as critical of tertians, where the paroxyſms happen on the odd days, and where the termination, as he acknowledges, conſtantly follows the ſolution of a paroxyſm. The latitude likewiſe which he aſſumes, in explaining the apparent irregularities, is much too great. If we are permitted to reckon either the beginning or the termination of a paroxyſm, as the critical period, according as it ſhall beſt ſuit our theory, it is eaſy to elude the moſt poſitive teſtimonies of experience. Yet notwithſtanding theſe defects, the different tracts of Galen on this ſubject, deſerve to be carefully read.

The

The facts they contain, though ſometimes miſapplied, are often important; and though we are not always ſatisfied with the reaſonings of the authour, we are aſtoniſhed at the amazing maſs of learning and knowledge found in his works.

There is little new information, on the ſubject of critical days, to be met with in the writings of thoſe Greek phyſicians, who were poſterior to the time of Galen. (5) Ætius Amidenus, indeed, brings into narrower compaſs the ſubſtance of the doctrines of his predeceſſors. He mentions likewiſe, the moſt material of thoſe circumſtances, which influence the deviations from the regular criſis; but it is evident, that he has not ſufficiently underſtood their application. Alexander Frallianus, who was an excellent practitioner, and a man of long experience, paſſes over this ſubject without particular notice; and though (6) Paulus of Ægina has detailed the opinions of Galen in a more compreſſed form, than they are found in the original authour; yet he has not added any new obſervations of his own. From the manner, indeed, in which he ſpeaks of the peculiar virtue of the ſeventh and fourteenth, we ſhould be apt to believe, that he is not altogether free from prepoſſeſſion in favour of Pythagorean numbers.

It

It was reaſonable to have expected information, on the ſubject of critical days, from the writings of the Arabian phyſicians. The Arabians inhabit a country, where the periodical movements of nature are perhaps more clearly marked, than in our northern latitudes. Some diſtricts of their country likewiſe were famous for the ſtudy of the ſciences at an early period, though it does not indeed appear that much of this knowledge deſcended in a direct channel to the Arabians of the preſent times. The Arabian phyſicians, in many inſtances, enriched medical practice with new forms of remedies; but they have for the moſt part only adopted the theoretical doctrines of the Greeks, particularly of Galen. Avicenna, the moſt famous among their phyſicians, and undoubtedly a great man, has Galen conſtantly in his eye: in ſhort, he has done little more on the ſubject of critical days, at leaſt, than merely tranſlate the opinions and arguments of the celebrated Greek. (7) He attempts, indeed, to be more explicit in aſcertaining the date of invaſion; but he does not in fact, go much beyond his predeceſſors;--hinting only obſcurely, that the critical days ought to be calculated from the proper formation of the type, or the diſtinct invaſion of the fever. (8) He has added,

added, however, that the odd days, are properly the critical days of the ſingle tertian, and that the eleventh of courſe, obtains rank of the fourteenth in this diſeaſe.

There are many authours, who have written on this ſubject, ſince the arrival of ſcience in Europe; but there are few that I have met with, who have thrown light on it from their own obſervations. The moſt of them have borrowed the opinion from Hippocrates; and accordingly have attempted to eſtabliſh the truth of it, on the facts which are found in the writings of that authour; facts, which, on enquiry, will ſcarcely be found to be accurate enough to be made the baſis of a general doctrine. It would be time ill ſpent, to enter into a detail of the arguments of this numerous liſt of writers; who, in reality, have oftener attempted to ſupport their opinions by the authority of Galen and the ancients, than by the facts which might have been found in their own experience. (9) From writers, however, of this deſcription, it would be unjuſt, not to ſeparate Hoffman, an authour, who has related with candour the reſult of his own obſervations, in a practice of forty years and upwards. The facts, which Hoffman mentions, throw conſiderable light on the ſubject; yet ſtill they do not remove all

all the difficulty. They neither enable us to form an eſtimate of the power of the different critical days; neither do they at all aſſiſt us in comprehending the cauſe of the deviations. There are probably other modern authours beſides Hoffman, who have treated of the power of critical days in fevers; (10) but, except Dr. Cullen, I have not met with any one, who has left any obſervations which deſerve much notice. (11) This celebrated phyſician is a warm advocate of the ancient doctrine of critical days. He ſubſcribes profeſſedly to the arrangements of Hippocrates; though he adds likewiſe the reſult of his own obſervation, in the various kinds of fevers of this country.

The moſt eminent of the ancient and the moſt ſyſtematic of the modern phyſicians, all agree in aſcribing to certain days a particular power in terminating fevers; yet they do not ſo perfectly coincide in the arrangement they have given of thoſe days, or in the cauſes they have aſſigned for the particular pre-eminence. The inconſiſtency of Hippocrates has, perhaps, been in ſome meaſure the ſource of this diverſity of opinion. In one place, this authour has ranked the twentieth as the proper critical day in fevers; in ſome others, this power is attributed to the twenty-firſt.

firſt. That the twenty-firſt is properly the day of criſis, was the opinion of (12) Archegenes and Diocles: that it ſhould be ſo, is not inconſiſtent with the general principle of the Hippocratic doctrine; viz. (13) the movements of a quaternary period. So far is clear; but as it was obſerved by Hippocrates, as well as by other authors, that the twentieth was ſtill more frequently a day of criſis than the twenty-firſt, a προθεσις, on the fourteenth, was introduced to account for this apparent deviation from the general rule. This idea of προθεσις, or accumualtion of one period on another, which is mentioned in the writings of Hippocrates, originated perhaps in the doctrine of Pythagoras. It is adopted by Galen, and it appears in reality to be occaſionally true; yet it can never be conſidered as an eſtabliſhed principle in the movements of febrile diſeaſes. By means of ſuch accumulation, however, Galen has attempted to eſtabliſh the pre-eminence of the twentieth, which he conſiders as the real critical day of Hippocrates. That the twentieth--(not the twenty-firſt) is actually the critical day of Hippocrates, is likewiſe decidedly the opinion of Dr. Cullen, who, going a ſtep farther than his predeceſſors, endeavours to ſupport his aſſertion by ſome arguments, which are entirely new.

new. (14) This ingenious authour hazards the bold conjecture, that the appearance of the twenty-firſt, in the writings of Hippocrates, has ariſen wholly from accidental error in the original manuſcript: but with all due deference to ſuch reſpectable authority, I muſt beg leave to ſuggeſt, that the twenty-firſt occurs too frequently in thoſe writings, which have been aſcribed to the Coan Sage, to give countenance to the opinion, that it owes its place, as a critical day, to careleſs error. The other argument is more ingenious; but perhaps not better founded. This writer has ventured to maintain, that the type of febrile diſeaſes changes to quartan after the eleventh; but I can ſee no good reaſon for the ſuppoſition. Medical writers have repeatedly noticed inſtances of criſis, on the thirteenth, and fifteenth; even my own experience, narrow as it has been, furniſhes me with ſufficient evidence, that criſes actually do happen at the above-mentioned periods.

As thoſe days, which have been chiefly conſidered as critical, are now ſuppoſed to be ſufficiently known, it will not be ſuperfluous in the next place, to take a ſhort view of the cauſes, on which the particular pre-eminence has been thought immediately to depend. The quaternary period, which in reality

reality is a period of four, and a period of three days ſucceeding each other alternately, is the general principle aſſumed by the ancient phyſicians, to explain this arrangement. But if we continue to purſue the undiſturbed movements of a quaternary period, we ſhall bring the eighteenth and twenty-firſt into the order of critical days, rather than the ſeventeenth, and twentieth. The contrary is in fact the caſe. To obviate therefore this difficulty, or to reconcile obſervation with theory, a προθεσις has been ſuppoſed to take place on the fourteenth. That a προθεσις, or as it may be tranſlated, the accumulation of the beginning of one period on the extremity of another, frequently takes place, cannot be denied; but its appearance is not determined by a fixed law. It is obſerved on the ſeventh, on the fourteenth; in ſhort, on any day whatever. The quaternary period, with προθεσις on the fourteenth, is the only principle employed by the ancients for explaining the uſual arrangement of the critical days; yet I muſt obſerve, that it is capable of doing this, only in a very imperfect manner: it totally excludes ſome days of very conſiderable power. (15) Dr. Cullen, ſenſible, perhaps, of this defect, ſuggeſted that there was a change from the tertian to the quartan type on the eleventh. This

This change, it muſt be confeſſed, explains with perfect plauſibility the pre-eminence of the fourteenth, ſeventeenth and twentieth; but there is the ſtrongeſt reaſon to believe, that it does not in fact take place. I mentioned before, that inſtances are recorded by medical writers of criſes, which have happened on the thirteenth, fifteenth, and the other days, which are not included in the quartan period; and I can add from my own experience, that where the diſeaſe was of ſuch a kind, that a type could be clearly traced; no ſuch change, as this authour has ſuggeſted, was ever ſeen.

Having ventured to declare, that the cauſes, which have been hitherto aſſigned for the pre-eminence of certain critical days in fevers, are extremely defective; the facts, which I have mentioned before, it is preſumed, may enable us, if they are properly underſtood, to give a more ſatisfactory explanation of this ſingular phenomenon. There are few people of experience and obſervation, who do not know that the tertian is the moſt prevailing type in frebile diſeaſes. This, at firſt ſight, gives a general pre-eminence to the odd days; but though the tertian period prevails very generally in fevers, yet it muſt alſo be remembered, that theſe revolutions are ſometimes

times completed in a ſhorter ſpace of time than the regular period; whilſt the types are frequently found to be doubled, or even more variouſly combined. In conſequence of theſe accidents, apparent irregularities are often produced in the order of the critical days; though they may be all ſatisfactorily accounted for, by calculating the time by the periods of the diſeaſe, or by ſimplifying thoſe types which are more evidently complicated. By attending to the circumſtances I have mentioned, all the difficulties may be eaſily removed in periodical fevers; but as numerous inſtances of fevers occur, where no type can be clearly traced; ſo it is neceſſary in ſuch caſes to ſeek for ſome other principle, which may be capable of explaining apparent irregularities. There very ſeldom perhaps happens an inſtance of fever of long continuance, where the ſymptoms do not undergo ſome change in the courſe of the diſeaſe. Thoſe changes or revolutions are generally at conſiderable intervals, frequently at an interval of ſeven days. The circumſtances by which thoſe changes are indicated, are not by any means obſcure; and, perhaps, there would not be great error, if we conſidered them as the commencement of a new complaint; at leaſt by conſidering them as ſuch, the general

principle of the critical days is preſerved conſiſtent and uniform throughout. I ſhall mention ſuch explanations as have occurred moſt frequently in my own practice. It often happened, that the ſymptoms of the diſeaſe underwent a material change on the fifth. It terminated on the ninth, or perhaps only put on a new appearance on the ninth, its final termination not happening till after another period of five days. In the ſame manner, a change of ſymptoms on the ſeventh, was followed by a criſis on the thirteenth; or if the change of ſymptoms was not obſerved till the ninth, the criſis probably did not make its appearance till the ſeventeenth. Such change of ſymptoms on the odd days, (where we may ſay with propriety enough, that one diſeaſe was accumulated upon another), there being ſeldom any previous marks of criſis, was by no means uncommon; yet it happened ſtill oftener, that the paroxyſm of the odd day declined; the original diſeaſe terminated imperfectly, whilſt a new one began the day following, which was an even day. By ſuch accidents the order of the days of criſis was changed: And from the laſt mentioned cauſe the fourteenth, as a ſecond ſeventh, becomes remarkable among the critical periods of fevers. This idea of a ſecond ſeventh occurred

to me many years ago, and long be-
was acquainted with the opinions of
crates or of Galen. It now receives
ation from the teſtimony of theſe care-
ſervers. There are many, I make no
, who will be diſpoſed to treat it with
le; but I ſhall combat their opinion with
ier argument than a requeſt, that they
down carefully the hiſtory of a tedious
and afterwards review its courſe with-
judice or partiality.

ow only beg leave to add, that the facts
I have mentioned in the preceding
are circumſtantial, and give room to
ide, that by ſimplifying complicated
by calculating the time by the revolu-
of the diſeaſe, or by beginning to date
nd time from thoſe great and remark-
hanges, which happen at more diſtant
ls, a doctrine is formed, perfectly uni-
and conſiſtent with itſelf. It is con-
l by every obſervation which I have
iitherto able to make. It is no more
l than an analyſis of thoſe ſeveral caſes,
I have occurred in my own practice;
I in periodical fevers at leaſt, has been
bly extenſive.

: though the prevalence of a tertian
explains ſatisfactorily the general criti-

cal power of the odd days; and thoſe other circumſtances, which I have likewiſe taken notice of, account no leſs clearly for all the deviations, which are obſerved to take place; yet if we attempt to ſeek for a cauſe of this type, or of thoſe changes, which happen at more diſtant, particularly at the ſeptenary periods, our progreſs is ſoon ſtopt. Galen, who ſeldom heſitates in explaining the phenomena of nature, acknowledges here that he was unwillingly drawn to a diſcuſſion of the ſubject. The queſtion undoubtedly is a difficult one; and, it is to be feared, muſt remain for ever unknown. In the Eaſt, where the powers of the human mind were not only earlier developed; but where men, from climate and modes of life, were led more early to obſerve the motions of nature, ſtated and periodical movements were ſoon diſcovered in the economy of the ſublunary ſyſtem. Egypt, there is reaſon to believe, is one of the countries where theſe revolutions were firſt taken notice of; at leaſt it was on the banks of the Nile, that the Greek philoſophers firſt gathered the ſeeds of natural ſcience. Among the knowledge or opinions, which theſe ſages carried back to their native country, we may reckon the doctrine of the power of numbers; which, though disfigured perhaps by the metaphyſical

taphyſical genius of the philoſopher of Samos, has obſervation in ſome degree for its baſis. It does not concern us at preſent to enter into a particular diſcuſſion of this opinion; but as far as relates to the ſubject in queſtion, we cannot refuſe acknowledging, that the frame of man is liable to regular changes, at particular periods, comprehended in a certain number of days and hours. But though this general truth is indiſputable, yet there is no argument which leads us to ſuppoſe, that thoſe changes are, in any degree, influenced by an harmonic proportion in the ſimple number of the days. Ill founded however as this doctrine obviouſly is, it was in high faſhion with the Greeks in the time of Hippocrates; and ſeems evidently to have had ſome influence on the opinions of this authour. Without ſuch a prepoſſeſſion, indeed, it is not eaſy to conceive, how he could have fabricated the ſyſtem which he has given to the world; as it by no means reſults from the facts which are found in his writings. Galen in this, as in moſt ſubjects, follows the footſteps of Hippocrates. He diſclaims, I muſt confeſs, the *power of numbers*, ſimply as numbers having any effect upon the moſt uſual days of criſis; but he maintains the influence of a quaternary period, which appears very plainly to be

a remnant of the doctrine of Pythagoras. However, after exhauſting himſelf, and fatiguing his readers with a detail of uſeleſs conjectures, he at laſt ventures to conclude, that the buſineſs of criſis is to be referred ultimately to the courſe and different aſpects of the moon. The opinion, like many others recorded by the Greek phyſicians, draw its origin from Egypt. It is not, perhaps, altogether without appearance of plauſibility; yet I muſt add, that if the moon has in reality any influence in this buſineſs, the laws which regulate its effects are obſcure;--indeed, not in the leaſt underſtood. The conjecture however, fanciful as it appears to be, met with the general aſſent of medical writers, till about the middle of the ſixteenth century, when Fracaſtorius, a man of ingenuity and elegant genius, attempted to ſubſtitute another in its place; though unfortunately, not a more probable one than that of his predeceſſors. (16) This authour, after a diſplay of much learning and general knowledge, at laſt ventures to conclude, that the power of the different days of criſis, depends on peculiarities in the laws of motion of the different humours, which give riſe to the different ſpecies of the diſeaſe: but with regard to this hypotheſis, it is only neceſſary to remark, that

while

while the very exiſtence of the humours is doubted with reaſon, there can be no certainty in determining the laws of their motions. But though the opinion of Galen, and this of Fracaſtorius, are only vague and very queſtionable conjectures; (17) yet they are the only ones, ſo far as I know, which have been offered to the public. The ſubject is too intricate, perhaps, ever to be explained. For though we clearly perceive that fevers are uſually of a ſtated duration; yet we are unable to perceive, whether this duration depends on ſomething inexplicable in the peculiar nature of the cauſe, which ceaſes to act, or changes its mode of action at a certain period; or to ſome imperceptible revolution in the human frame, which deſtroys in a given ſpace of time, that particular aptitude between the ſtate of the body and the morbid cauſe, in which the diſeaſe may be ſaid to conſiſt. This only we know with certainty, that where the febrile motions are violent and continual, the diſeaſe haſtens to a termination; where they are languid and feeble, or ſuffer long interruptions, its duration is often drawn out to an undetermined length of time. Thus continued fevers, with inflammatory diatheſis and much vaſcular excitement, for the moſt part terminate de-

cidedly in ſeven or nine days; while thoſe with low and languid motions, with long and diſtinct intermiſſions, as the quartan, and even ſometimes the tertian, continue for months, and decline at laſt by ſlow and almoſt imperceptible degrees.

It may ſeem that I have treated very fully of the critical days of fevers; yet before leaving the ſubject altogether, there is one thing ſtill which requires to be mentioned:--I mean the great proportion of fatal terminations, which happen on the even days. The even days were obſerved to be fatal in the proportion of three to one, in thoſe fevers, which came under my care during the time that I lived in Jamaica. The fact, which is curious and hitherto, I believe, unnoticed, was diſcovered in the following manner. That I might the better trace the progreſs of nature through the whole courſe of the fever, a ſubject which then engroſſed my chief attention, I viſited often, and ſpent much of my time in the apartments of the ſick. Among other things, I diſcovered the manner in which death more uſually approached. The natural courſe of the paroxyſm appeared generally to be finiſhed, or the action of the febrile cauſe ſeemed actually to have ceaſed. The lightning before death, as it is termed, which has been generally attributed

attributed to the laſt efforts of dying nature, was frequently ſeen to take place. This was even ſometimes ſo remarkable, as to give flattering hopes of a favourable criſis; yet in a ſhort ſpace of time, the powers of life begun to fail, and at laſt were gradually extinguiſhed, like an expiring taper.--The criſis, ſtrictly ſpeaking, happened on the odd days, equally the ſame in thoſe who died, as in thoſe who recovered; only I had inaccurately, accuſtomed myſelf to refer the critical period to that moment, where the ſigns of criſis were firſt perceived; in the other, I had conſidered it as happening at the hour of actual death. Thus it was obſerved in thoſe fevers which terminated fatally on the even days, that the powers of life, though irrecoverably exhauſted, were not totally extinguiſhed by the paroxyſm of the odd day. This paroxyſm, in ſhort, ſeemed to decline after the uſual duration. It left the body, in ſome meaſure, free from diſeaſe; but ſo completely deranged in the vital functions, that the action of living, though it often went on for a few hours, could not be continued long. In this manner, the hour of death was frequently protracted to the even day; yet death happened ſometimes on the even days, from another cauſe. The decline of the paroxyſm, which in many caſes

was

was hardly perceptible, in others was very plain. The diſeaſe terminated; but a new one recurring, after a ſhort interval, ſpeedily put a period to exiſtence. In the mild fever of Jamaica, death uſually approached in the gradual manner I have juſt deſcribed; yet in caſes of much violence and malignity, the fatal termination was frequently on an odd day. In ſuch caſes the patient died in the height of the paroxyſm, carried off by convulſions, apoplexy, or other accident.

Thoſe authours, who, ſince the time of Aſclepiades, have denied the power of critical days in fevers, are numerous; and many of them poſſeſs conſiderable authority in the medical world. Their opinions, however, cannot be conſidered as of great influence in the preſent caſe, though they may aſſert, that they never have obſerved the pre-eminence of any particular days in terminating febrile diſeaſes; ſuch an aſſertion means but little; unleſs its authour convinces us, that he has adopted a method of inveſtigation by which thoſe regular movements, if they actually exiſted, could not fail to be diſcovered. Truth in the preſent caſe, can only be known from minute and careful obſervation; but a train of minute obſervation is not likely to be the work of a buſy phyſician; and one, who is little

employed, has not ſufficient materials
practice to engage his attention to a con-
ed purſuit. I conſider it as my own
l fortune, to have been placed between
two extremes of idleneſs and too much
neſs. In the country where I reſided for
e time, the movements of nature were ge-
ally ſo diſtinct, as to be obſerved without
ch difficulty; my practice likewiſe was ſuf-
nt to employ my mind, and not more
n it could comprehend eaſily; ſo that I
ſufficient leiſure to write down, and to
ſt the obſervations which I have related
ve. They afford, if I miſtake not, ſome
ts which are preciſe and pointed; and
ich ſuperſede a multitude of arguments.
ill not venture to ſay, that they remove
the myſtery from this dark ſubject; but
annot help flattering myſelf, that they
nt out a road by which we may continue
inveſtigations with ſucceſs. The ſubject
critical days is of ſuch importance, as to
mand every attention. A knowledge of it
es credibility to our art; whilſt ignorance
this reſpect is the ſource of perpetual miſ-
ce and diſappointment. There are many
yſicians of the preſent day, who treat the
a of critical days with ridicule; but their
rtions only afford an argument of their
own

own precipitancy, and ſuperficial obſervation. The man in reality, who pretends to cure a fever, without a knowledge of the critical periods of nature, is not leſs preſumptuous, than the mariner, who undertakes to conduct a veſſel through the ocean, without being inſtructed in the manner of calculating her courſe.

CHAP.

CHAP. IV.

OF THE GENERAL REMOTE CAUSES OF INTERMITTING AND REMITTING FEVERS.

THE general remote cauſes of intermitting and remitting fevers have been ſo fully inveſtigated by ſeveral eminent writers, particularly by the induſtrious and learned Lanciſi, that little remains to be added: nor perhaps ſhould I have thought it neceſſary, even to have mentioned the ſubject, were it not to take notice of ſome opinions of the late Sir John Pringle, which appear to have been formed too precipitately; and which, I can affirm from experience, have been pernicious to the health of thouſands. It would be a very needleſs oſtentation to adduce the authority of the ancients, to prove the general ſource of the diſeaſe which is the ſubject of the preſent treatiſe. The hiſtorians, no leſs than the phyſicians of every age, do not entertain a doubt, that fevers of the intermitting and remitting kind, owe their origin to exhalations from ſwampy and moiſt grounds.

Daily

Daily experience ſtill proves it; and there are few men whoſe obſervations are ſo circumſcribed, as not to know, that it is in the neighbourhood of ſwamps, and near the banks of freſh water rivers, that thoſe diſorders chiefly prevail. But though it is only in the above ſituations, that intermitting and remitting fevers are more peculiarly epidemic; yet it likewiſe deſerves to be remarked, that, independent of the particular circumſtances of ſoil and local ſituation, the endemic of all champaign countries is ſubject, in a greater or leſs degree, to an appearance of periodical revolution. Mud and ſtagnant water, in every climate, poſſeſs the materials of the cauſe of this ſpecies of diſeaſe; but a combination of other circumſtances is required to give them activity. Among the principal of thoſe circumſtances, which call forth this action, we may reckon the influence of a powerful ſun. Hence, (as is commonly known), ſome ſituations, which, in the colder months of winter, are diſtinguiſhed for no particular diſeaſe, in the hot months of ſummer and autumn, are obſerved to be moſt malignantly unhealthful.

The nature of this exhalation or cauſe of fever, though it has long been a ſubject of enquiry, remains ſtill unknown. We plainly perceive it to be of various degrees of force, and

and in various ſtates of concentration; and we can eaſily conceive it to be variouſly modified and combined;--but we go no farther. It has been ſaid, to poſſeſs a ſeptic principle; but this alone will ſcarcely be thought ſufficient, to account for the very peculiar manner in which it affects the human race. Some other quality is neceſſarily joined with it, which our ſenſes cannot lay hold of. But though the ingenuity of man has not hitherto been able to penetrate the intimate nature of this cauſe of fever, we ſtill have it in our power, in ſome degree, to trace its effects on the human conſtitution. We plainly perceive that an habitual expoſure to it, is peculiarly *unfriendly* to the principle of life, and in a very remarkable manner ſhortens the period of exiſtence. In proof of this I mention from good authority, that white females, born and conſtantly reſiding in the lower diſtricts of the province of Georgia in America, have ſeldom been obſerved to live beyond the age of forty. Males, ſometimes approach near to fifty; while Europeans, who had arrived at manhood before they came to the country, often attain a good old age. The fact is curious, and ſhews, in a ſtrong point of view, the deleterious quality of the air of thoſe climates. But though the general nature of the country,

country, which I have juſt now mentioned, is unhealthy in a high degree; yet there are ſituations, in the Carolinas and Virginia, which are deſtructive of life in a ſtill more remarkable manner. There is not on record, I am credibly informed, an inſtance of a perſon born at Peterſborough in Virginia, and conſtantly reſiding in the ſame place, who has lived to the age of twenty-one. When the Britiſh army marched through this province, in the year 1781, I had the opportunity of ſeeing a native of this town, who was then in his twentieth year; but he was ſaid to be the firſt, who had ever attained ſo advanced an age. He was decrepid, as if from the effects of time, and it did not appear that he could ſurvive many months. Yet it is not a little curious, that this man had never been much confined with ſickneſs. The reſiding conſtantly in the ſame pernicious air, ſeemed alone to have been ſufficient ſo remarkably to accelerate decrepitude. But though the inſtances I have mentioned afford ſufficient proof, that this miaſma is unfriendly to the principle of life; yet we are by no means inſtructed, as to the manner, by which it becomes ſo. This ſeems to be one of the arcana of nature; and it will profit little to proſecute it farther by conjecture. It will, however,

ever, be an object of utility, to mark the ſoils and ſituations in which the exhalation moſt abounds, and to trace the cauſes which heighten or lower its activity.

The hiſtory of the remote cauſes of intermitting and remitting fevers, with all the circumſtances connected with them, having been, as I ſaid before, ſo fully inveſtigated by others, I ſhall only add a few curſory remarks, where the information does not ſeem to be ſufficiently preciſe, or where the concluſions, which have been made, are not juſtifiable by experience. (1) It is an opinion, which, though it did not originate with Sylvius de le Boe, evidently gained weight from his authority,--that a mixture of ſalt with freſh water, as corrupting more eaſily, affords a more noxious exhalation than freſh water alone. (2) Lanciſi has mentioned the obſervation; and (3) Sir John Pringle conſiders it as an eſtabliſhed fact; but the evidence, by which he attempts to ſupport his opinion, is not deciſive. It would be in vain to deny, that the neighbourhood of lakes or rivers, with a mixture of ſalt water, is often highly unhealthful; yet we may affirm with confidence, that it is ſeldom more ſo, than where the lakes and rivers are perfectly unmixed. In proof of this aſſertion, I might adduce the

example of Savanna la Mar in Jamaica, or draw inſtances from the numerous iſlands on the coaſt of the Carolinas; where ſea and river water are often blended together in various proportions; to which might be added, the more particular evidence of the relative healthineſs of the banks of rivers. So far as I have obſerved, the uſual endemic was leſs frequent, and leſs formidable on the banks of rivers, after their waters became mixed with thoſe of the ſea, than before this happened; unleſs the circumſtances were in other reſpects more favourable for the production of the diſeaſe. Hence there is but little reaſon for ſuppoſing, that there actually exiſts any degree of mixture of ſalt with freſh water, at leaſt of running water, which abſolutely heightens the noxious quality of the exhalation. The above is an opinion of ſufficient conſequence to demand inveſtigation; but there is another advanced by this celebrated authour, worſe founded, and of ſtill greater concern, which I ſhall likewiſe mention. From an idea that a free circulation of air, is of all things the moſt eſſential to the preſervation of health, Sir John Pringle enjoins, in a very poſitive manner, not only that open ground, but that the banks of large rivers ſhould be choſen, in preference to other ſituations,

tions, for the encampment of troops. This authour's opportunities of information were good; his opinion has therefore gained weight, and his advice, I am afraid, has been often fatally followed. It would be no difficult taſk to produce teſtimonies, from both ancient and modern hiſtory, of the unhealthineſs of thoſe ſituations, which Sir John Pringle has thought proper to recommend; but at preſent I ſhall confine myſelf to that, which has more immediately fallen under my own obſervation. The inſtance I ſhall mention, is only a ſingle one; but it proves ſo clearly the danger of encamping on the banks of freſh water rivers, as to render all others ſuperfluous. In June 1780, the firſt battalion of the 71ſt regiment was detached to the Cheraws, where it encamped on open ground, within five hundred paces of the river Pedee. The people of the country, taught by experience, ſuggeſted the propriety of drawing back the encampment into what is called the Pine-barren, aſſigning as the cauſe of their advice, that the diſtance, as well as the cover of the wood, might be a ſecurity againſt the damps of the river, which were obſerved to be extremely noxious in that climate. A poſition in wood, acceſſible on all ſides, would not perhaps have been military; ſo that no alteration

teration was made. The other battalion of the regiment joined in July. It arrived in perfect health, and encamped likewiſe on open ground; but ſtill nearer the river. In a fortnight the intermitting fever began to make its appearance; and in leſs than three weeks, more than two thirds of the men were ill; whilſt ſcarcely one of the officers had eſcaped. The officers, it muſt be remarked, encamped in the rear of the men, and immediately on the bank of the river, the courſe of which was uncommonly ſlow at this place; while its banks, though high, were oozy and foul. There are few inſtances on record perhaps, where a degree of ſickneſs, greater than the preſent, has been obſerved in ſo ſhort a ſpace of time. The firſt battalion, however, did not ſuffer in the ſame proportion. The ground of encampment was not only at a greater diſtance from the river; but being alſo nearer to a wood, many of thoſe, who were not confined by their duty to a particular ſpot, found a convenient ſhelter in its ſhade, from the powerful heat of the ſun.--Theſe I muſt not omit to mention, were the leaſt ſickly of the whole encampment. The above is an important fact. It proves clearly, that no ideal circulation of air can counterbalance the noxious exhalations from

from rivers; and it likewiſe affords a preſumption, that inſtead of danger, there is ſafety in the ſhelter of wood. But with regard to this, no abſolute rule can be given. It muſt generally be decided by local circumſtances, whether wood, or open ground are to be preferred for the encampment of troops. Upon the whole, however, there are many reaſons to induce us to believe, that as an encampment is not only more military in the body of a wood, than in open ground ſurrounded by woods; ſo it is likewiſe more ſafe with reſpect to health; particularly if within the reach of effluvia from ſwamps or rivers. The reaſon which offers is obvious. The wood not only ſtops the progreſs of noxious vapours carried from a diſtance; but it alſo covers the earth from the immediate action of the ſun,--the powerful cauſe of exhalation; in doing which, it perhaps, does more than counterbalance the leſs free circulation of air, or the greater dampneſs of the ground. But leſt the authority I have mentioned, ſhould not be thought ſufficient, the opinion receives farther confirmation from the teſtimony of the ancients. Hiſtories abound with examples of deſtructive epidemics, which have followed the cutting down of groves, which covered moraſſes, or which intercepted the progreſs of

marſh exhalation. America alſo furniſhes daily inſtances of a ſimilar truth. In this country the unhealthineſs of a place is often obviouſly increaſed, by cutting down the woods of the neighbouring ſwamps: hence no rule is more liable to exceptions, than that which has been ſo generally enforced; viz. that clearing a country of its woods invariably renders it healthy: unleſs the grounds be drained and cultivated, as well as cleared, the effect is likely to be the reverſe.

It would be curious and uſeful, could we trace this miaſma or cauſe of fever in its progreſs. I do not deny that the noxious exhalation may be accidentally enveloped in fogs; but it is not neceſſarily ſo; and I add, that the dews of night, unleſs as an exciting cauſe, are leſs pernicious than has generally been imagined. Low grounds, in the ſame manner, are not always unhealthy; as high and dry ſituations ſometimes afford no protection againſt the ravages of this diſeaſe. The ſituation of the encampment which the 71ſt regiment occupied at King's-bridge, in the year 1778, affords a curious and direct proof of the truth of this opinion. About two hundred paces to the right of the ſpot, on which the tents were pitched, was a tract of low and ſwampy ground; but the immediate

diate ſituation was dry, and of conſiderable elevation. The right was *particularly* ſo; yet it was principally on the right, where the diſeaſe raged with violence. The left, though on low ground, over which fogs frequently hung till late in the day, ſuffered in a much ſmaller proportion. From this we might infer, that a dry and elevated ſituation is by no means exempted from intermitting and remitting fevers: but the great degree of ſickneſs, which happened to thoſe people, who not being confined by the nature of their duty to one particular ſpot, pitched their tents on a hill in the rear of the encampment, proves it clearly. The ground, which thoſe perſons made choice of was directly in the tract of air, which blew over the ſwamp. It was dry and ſcarcely ever covered with fogs; yet there was not an individual among them who encamped upon it, who did not ſuffer from this raging epidemic. The preſent inſtance, with many others which I might adduce, leaves little room to doubt, that inſtead of expoſing encampments to ſtreams of air, which blow from rivers or ſwamps, it ought to be our principal buſineſs to guard againſt thoſe noxious effluvia, by the interpoſition of woods or riſing grounds. Exhalations which are the cauſes of fevers are ſubtile,

and ſeem to be pernicious, chiefly in their aſcent:--viſible damps or night dews are comparatively innocent.

So great is the importance of preſerving the health of an army in the field, that the choice of encampments ought to be made a ſubject of particular enquiry. The opinion of Sir John Pringle on this head, (which, in fact, is an opinion of theory rather than obſervation), has been followed too long without examination. The directions of this authour are influenced wholly by the dread he entertained of a contagious or hoſpital fever; but a contagious fever, is ſeldom a diſeaſe of the field; and has, perhaps, ſcarcely ever been known to make its appearance in a moving camp. Diſeaſes of the field are often epidemic, ſometimes malignant, but rarely contagious. I even doubt if the dyſentery, whilſt a camp-diſeaſe, is ſo in any remarkable degree. It was not ſo at leaſt in America, in thoſe campaigns, where I had the opportunity of knowing the ſtate of the army.

The general remote cauſe of intermitting and remitting fevers, conſiſts, as was mentioned before, in inviſible exhalations floating in the air. Theſe are more copious in ſome ſituations than in others; and appear to be rendered more or leſs active by a great variety of

of cauſes. Among the number of thoſe cauſes, which have been accuſed of exciting fever, it has been uſual to reckon exceſs in drinking. It cannot be denied, that this cauſe, in ſeveral caſes, has brought forth the diſeaſe, when it probably would not have otherwiſe appeared; yet it has been likewiſe obſerved, that a debauch of wine has ſometimes reſtored the body to health, when languiſhing under the influence of this diſorder in an obſcure or irregular form. The moderate uſe of wine, however, has been generally recommended as a preſervative in times of great heat, and epidemic ſickneſs:--and under limitations it undoubtedly is of uſe. (4)--In a time of very preſſing calamity, the oracle of Delphi gave its ſanction to the preſcription; and hiſtory bears teſtimony to its ſucceſs. But beſides exceſs in drinking, cold and fatigue have likewiſe been conſidered among exciting cauſes of fever. In ſhort, whatever exhauſts or diminiſhes the activity of the powers of life, may be juſtly viewed in this light. Yet ſtill I muſt obſerve that neither cold, fatigue, nor any of the cauſes of this train, give occaſion to a proper intermitting or remitting fever, unleſs the prediſpoſition to the diſeaſe be particularly ſtrong. As a proof of this, I muſt beg leave to mention

tion a fact, which fell under my own obſervation. In an expedition into South Carolina, in the year 1779, a part of the army was near five hours in paſſing Puriſburg ſwamp. The men were always up to the middle, ſometimes up to the neck in water. The cold and fatigue were both very great; and a fit of intermitting fever was the conſequence in a great number of the ſoldiers: yet it was only in a few inſtances, that the diſeaſe went through a regular courſe, though there was even a general pre-diſpoſition to it, in the habits of almoſt all the men who compoſed the detachment. The moſt of them had ſuffered from it ſeverely the preceding autumn; and a temporary return of it, was generally obſerved to follow any extraordinary exertion, or the application of a debilitating cauſe. The above cauſes are generally reckoned exciting cauſes of fever; but beſides theſe there are ſeveral others of conſiderable power, which as being commonly known, I ſhall not now ſpend time in enumerating. There however ſtill remains one, which, though very univerſal, and perhaps more powerful than any other, has hitherto been little attended to. The approach to the new and full moon, in ſome degree, perhaps in every part of the globe, but particularly in the Weſt-Indies, appears

ppears to be connected with the invaſion and elapſe of fevers, in a very remarkable manner. This obſervation has been hinted obſcurely by one or two authours; the idea has been treated with ridicule by others: and it muſt be confeſſed, that the facts, which have hitherto been produced in ſupport of the opinion, are extremely vague and equivocal. I ſhall therefore enter a little more minutely into the ſubject, and ſtate circumſtantially the evidence, from which I have been led to conſider the approach to new and full moon, as a powerful exciting cauſe of fever.

That the moon exerts ſome influence on the human frame, and that her different appearances are more or leſs connected with the progreſs and iſſue of diſeaſes, does not ſeem to have altogether eſcaped the notice of the ancients. In a fragment of Hippocrates, in the edition of Vander Linden, we find a detail of the different aſpects of the moon and planets, with their combined influence on the fate of diſeaſes; but the ſtyle and manner of this little tract are ſo perplexed, that I do not pretend to underſtand its meaning. (5) Galen had likewiſe ſome obſcure ideas on the ſubject; but he has left us nothing clear and explicit. The Arabian writers are alſo confuſed and inaccurate; ſo that the firſt circumſtantial

ſtantial evidence of the influence, or co-
nexion of the moon with the human body,
found in the works of Ballonius, a Fren
phyſician of the ſixteenth century. The fa
which this authour records, though not al
together in point, is curious. (6) A Pari
ſian lady of quality appears, by the accoun
of Ballonius, to have been very ſingularly af-
fected during an eclipſe of the ſun. Her com-
plaint threatened nothing dangerous, and her
phyſicians were amuſing themſelves with ob-
ſerving the progreſs of the eclipſe, when they
were ſuddenly ſummoned to her aſſiſtance.
In the moment when the eclipſe was deepeſt,
ſhe had the appearance of dying; but theſe
threatening ſymptoms decreaſed with the de-
creaſe of the eclipſe; ſo that ſhe at laſt re-
turned to her former ſtate. This is only a
ſolitary inſtance, and perhaps might be
reckoned accidental. We may however add
to it the general teſtimony of Ramazzini, who
lived at Modena in the beginning of the pre-
ſent century. (7) This authour's obſervations,
indeed, are by no means preciſe; yet he was
convinced by them, that the courſe of Epi-
demics was conſiderably influenced by the
particular ſtate of the moon. It is almoſt need-
leſs to mention Dr. Mead, who wrote a trea-
tiſe expreſsly on the moon's power on the
human

human body. The facts which this writer has collected, afford a reaſonable preſumption, that this planet is not without ſome influence on ſeveral diſeaſes to which man is liable; but we find not any thing in the work, which particularly relates to fevers. I ſhall mention a fact recorded by Dr. Grainger. It is the moſt circumſtantial I have yet met with; and the ſtrongeſt to be found perhaps in the writings of any European phyſician. Dr. Grainger, who was a ſurgeon of the army, ſerved in the Netherlands about the years 1746 and 47, and wrote a treatiſe on the intermitting fevers of that country. Among other obſervations he takes notice of a circumſtance which occurred to him at that time, and which he then conſidered as ſingularly curious; viz. (8) that twenty of the men of the regiment, of which he had the charge, were ſeized with this fever, which was then epidemic, on the day of a ſolar eclipſe. He has not made any application of the fact. It furniſhes however a very ſubſtantial evidence, of the influence or connexion of this planet, with the invaſion of febrile diſeaſes.

It appears to have been long known in India, that fevers have a tendency to relapſe about the new and full moon, and particularly

larly at the time of eclipſes; but Dr. Lind of Windſor is the firſt, who brought the knowledge of the fact to Europe. In an inaugural diſſertation, publiſhed at Edinburgh (I do not exactly recollect the year), this author obſerves, that this opinion prevailed very generally in the Eaſt. He adds likewiſe, that ſome inſtances occurred in his own practice, which gave him cauſe to believe that the fact was well founded. (9) Dr. Lind continued of this way of thinking for ſeveral years after his return to England. He does not indeed at preſent deny the fact. He only ſuggeſts that it may admit of a different explanation, from that which he had given in his firſt publication. The ſpring tides, as they overflow the low grounds, according to his preſent opinion, afford a more probable cauſe of the uncommon increaſe of fevers about the new and full moon, than the direct influence of the planet itſelf. I will take the liberty however to add, that this opinion has been offered to the public, from a very imperfect view of the ſubject. I can affirm, even from the confined circle of my own experience, that a connexion, between the moon and the invaſion of fevers, certainly takes place in diſtricts remote from the ſea; and I believe it is generally known, that a fever, or the paroxyſm of

fever,

fever, is not commonly the inſtantaneous conſequence of expoſure to its remote cauſe; which ought to be the caſe, if this authour's reaſoning were juſt.

The next, and indeed the only authour who has written profeſſedly on the influence of the moon in fevers, is Dr. Balfour; a gentleman who reſided ſeveral years in India, and who practiſed with reputation in the ſervice of the Company. This authour pretends to have inveſtigated the ſubject with care and attention; but there appears in reality, to be more theory and general aſſertion in the treatiſe than circumſtantial fact. The reſult of his obſervations he informs us, amounts to this: viz. that the three days which precede, and the three days which follow new and full moon, are remarkable for the invaſion and relapſe of fevers; that the day of the full moon, and the day of the change of the moon, are the moſt remarkable of all: and farther, that the days which follow, are, in general, more remarkable than thoſe which precede.

I have now brought together the ſubſtance of what is found in the writings of thoſe authours, who have mentioned curſorily, or treated profeſſedly of this ſubject. There is not in any part of it, if we except the inſtance recorded by Dr. Grainger, any thing accurate and

and preciſe enough to enable us to form an opinion. What has fallen under my own obſervation, I would flatter myſelf, is leſs ambiguous; and though it may not be ſo explicit, perhaps, as to eſtabliſh the doctrine completely, it may at leaſt aſſiſt us, I hope, in approaching nearer to the truth.--I ſhall relate it in a few words.

When I arrived in Jamaica, in the year 1774, I had no other knowledge of the influence of the moon in fevers, than what I retained from a curſory reading of Dr. Lind's diſſertation. I remember, however, to have mentioned the circumſtance to ſeveral practitioners, who had lived many years in the iſland. As I conceived there was a ſimilarity between the climates of Jamaica and Bengal, I thought it not improbable, that ſome of the practitioners of the country in which I then was, might ſupply me with ſatisfactory information on the ſubject. There were none of them, however, who acknowledged that they had ever obſerved any connexion between the moon and febrile diſeaſes; neither were there many of them, who ſeemed diſpoſed to give credit to its exiſtence. Twelve months or more elapſed without my having paid any further regard to the fact, when an accidental relapſe of fever, happening near the time

of

of full moon, recalled Dr. Lind's obſervation to my memory. It likewiſe brought to mind a circumſtance, which till then I had overlooked. I had ſeen frequently, though without attending to it particularly, that three or four of the ſoldiers of a company of the 60th regiment, who were quartered at Savanna la Mar, and of whom I had the care, were attacked with fever on the ſame day; whilſt it ſeldom happened, that any other febrile illneſs made its appearance in the garriſon, for the enſuing fortnight. This having been obſerved oftener than once, at the time the moon was near full, a hint ſuggeſted itſelf, that the cauſe, which was ſaid to influence relapſes in India, might here have an effect on the original invaſion. But in order to aſcertain the truth of this conjecture, which I conſidered as a matter of ſome importance, I provided myſelf with the almanack of the year 1776, and marked, in the blank leaf of it, the preciſe date of attack, of all thoſe fevers which came under my care. In looking over thoſe memoranda at the end of the year, I found I had put down thirty caſes of proper remitting fever, the invaſion of twenty-eight of which was on one or other of the ſeven days, immediately preceding new or full moon; that is,

in the ſecond and laſt quarters. The ſame plan of obſervation was continued through the following year, and the reſult, though not exactly the ſame, was ſimilar. Of twenty-eight caſes, which were found in the almanack, twenty-two were in the periods above-mentioned; that is, in the ſecond and laſt quarters of the moon. It deſerves however to be remarked, that three of thoſe ſix caſes, which were not in the common period of invaſion, happened actually on the day of new moon;--a few hours after the change had taken place. But beſides thoſe caſes of proper remitting fever which I have mentioned, there were likewiſe found in the almanack many days fevers and ſlight feveriſh diſorders, the invaſion of the greateſt number of which was likewiſe in the uſual period.

The above is a literal ſtate of the caſe as it ſtood in the almanack:--ſome remarks and obſervations, however, were added, of which the following are the principal: viz. That, though the whole of the ſecond and laſt quarters of the moon is included in this period of invaſion; yet the four days immediately preceding new and full moon, were more particularly diſtinguiſhed for thoſe febrile attacks: that in the dry ſeaſon, which is reckoned the moſt healthy, the time of invaſion was more cloſely

cloſely connected with the new and full moon, than in the wet and ſickly months, particularly when the ſickneſs was epidemic, or of a bad kind: and laſtly, that this influence, or connexion was more apparent in the ſoldiers of the garriſon, who were expoſed to few occaſions of diſeaſe, exceſs in drinking excepted, than in the inhabitants of the town and country, whoſe occupations carried them oftener to places of unhealthy ſituation; or whoſe modes of life obliged them to ſubmit to more various hardſhips or to greater fatigues than fell to the lot of a ſoldier in times of peace.

I ſhall further beg leave to add, that I went to join the army in America, in the year 1778; and that I continued in that country, the train of obſervation on this ſubject, which I had begun in the Weſt-Indies. The regiment, in which I ſerved, was encamped during the months of June and July on a healthy part of York-iſland. Fevers were rare; and the time of invaſion, of ſuch as did appear, was chiefly confined to the ſecond and laſt quarters of the moon. In the beginning of Auguſt, the encampment was removed to King's-bridge, where it occupied a very unhealthy ſituation. The intermitting fever ſoon made its appearance. It extended in ſome degree to the whole battalion; but raged with particular violence

on the right, which bordered on low and ſwampy ground. The approach to new and full moon never failed, even in this climate, to increaſe the number of the ſick; yet it deſerves to be remarked, that this increaſe was always ſmaller in proportion, in that part of the battalion, which lay contiguous to the ſwamp, where the diſeaſe was highly epidemic, than in the other extremity of the encampment, where it prevailed in a leſs degree. But ſtill upon the whole, when the regiment moved from their ground, in the beginning of November, of a hundred caſes of intermitting fever, which were marked in the almanack, eighty were found to have commenced in the uſual period of invaſion; that is, in the ſecond and laſt quarters of the moon. It is ſomewhat remarkable, that relapſes were in a ſmaller proportion. This regiment, ſome parts of the medical hiſtory of which I deſcribe, embarked on an expedition for the ſouthward in November, and arrived at its deſtination in Georgia, in the latter end of the year. It remained in the ſouthern provinces, and ſerved every campaign till the capitulation at York-town. The ſame train of obſervation was continued during this intervening ſpace, and the ſame influence of the moon ſeemed in general to prevail; but

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the notes having been loſt, I cannot now exactly aſcertain the degree in which this influence took place. Of this, however, I am certain, that even in times of the greateſt epidemic ſickneſs, when the connexion was evidently weakeſt, the number of the ſick was generally doubled in the periods approaching to new or full moon.

We cannot avoid concluding, from the facts which I have ſtated above, that the approach to new and full moon, or ſomething connected with that approach, may be juſtly conſidered as a powerful exciting cauſe of fever. The circumſtances, indeed, which I have mentioned, are ſo clear and unequivocal as to leave little room for doubt: nor did I entertain any, till I found that the obſervations of Dr. Balfour, on this ſubject, were ſo ſtrikingly different from mine. Bengal and Jamaica are diſtant from each other; yet few people will be diſpoſed to believe, that ſo great modification of a general cauſe has ariſen ſolely from this diverſity of climate. Dr. Balfour muſt ſpeak for himſelf. For my own part, I can only ſay, that what I ſaw I have related with truth. As I have told the manner in which the idea aroſe, with the manner in which the inveſtigation was conducted, I leave the concluſion to be formed by the reader.

CHAP. V.

THE PROXIMATE CAUSE OF FEVER.

THEORIES of the proximate cauſe of fevers, or more properly modifications of theories, are ſo numerous, that a whole volume would ſcarcely be ſufficient to give any tolerable account of them. It is a taſk indeed which I ſhall not undertake; yet I hope it will not be altogether ſuperfluous, to give a curſory view of the principles, which have directed the conjectures on this ſubject in different ages. The principles are, in fact, fewer in number than at firſt ſight they appear to be. Phyſicians, ambitious of raiſing their name and reputation, have ſhewn great induſtry in multiplying and modifying opinions; yet it does not appear, that they have produced any great variety of theories, which are fundamentally diſtinct.

The ancients, who were little acquainted with chemical principles, or with the qualities and properties of the nervous ſyſtem, placed the proximate cauſe of fevers in ſome ſignal ſymptom of the diſeaſe, ſuch as increaſed

creaſed heat, or abounding bile; or entering ſtill farther into the fields of ſpeculation, ventured to attribute it to derangements in the permeable canals of the body, or to affections of the humours, or circulating maſs of fluids. Hence obſtruction of pores, plethora, error loci, lentor and viſcidity, or putrefaction of the humours, have all ſeverally, at different times, or by different authours, been conſidered as the immediate or proximate cauſes of this diſeaſe. The theories, which prevailed in the ſchools till the beginning of the ſixteenth century, did not often extend farther than to the cauſes which I have mentioned: but after that period, the diſcoveries of the famous Paracelſus opened a road to innovation in medical reaſoning. The followers of this authour, if not numerous, were enthuſiaſtic and vociferous. They indulged in the wildeſt extravagance of conjecture; and their opinions, for a conſiderable time, were combated with the authority of Galen, rather than with ſolid argument and accurate reaſoning. At laſt the diſputes between Chemiſts and Galeniſts beginning to ſubſide, the chemical theories became incorporated with the doctrines of the mechanic philoſophy, which were revived more than a century ago, and which ſtill maintain ſome influence in the

common ſyſtems of phyſic. In the mean time happened the important diſcovery of the circulation of the blood; but no immediate change, in the manner of accounting for fevers, enſued immediately in conſequence of it. Yet as from this period the reſearches of phyſicians began to be conducted on a more extended plan, ſome parts of the ſyſtem were brought into view, which had been formerly little attended to. The nervous ſyſtem, which had been in a manner overlooked for many ages, was now found to be of importance in the economy of the animal machine; and authours ſoon began to conſider it, as affording a probable ſeat for the proximate cauſe of fevers. Among the firſt of thoſe authours, who viewed it in this light, we reckon Borelli and Dr. Cole; the one of whom in Italy, the other in England, propoſed much about the ſame time, new and different opinions about the proximate cauſe of fevers. Their conjectures, I muſt confeſs, are far from being probable;--(that of the Italian is ſcarcely ingenious) yet they deſerve to be mentioned in this place, as being among the firſt attempts to bring into view a part of the ſyſtem, which is very eſſential in enabling us to account for many appearances in febrile diſeaſes. It is commonly believed, that the

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nervous ſyſtem was not diſcovered to be a part of material importance, either in the functions of health, or in the affections of ſickneſs, till the laſt century. This in fact was generally the caſe; yet I muſt not omit to mention, that we meet with an expreſſion in the writings of Hippocrates, viz. τα ορμωντα η ενορμωντα σωματα, which might incline us to be of opinion, that this phyſician was not altogether ignorant of the influence of the nervous power; and that he actually conſidered this principle of the conſtitution to be of much importance in the management and cure of diſeaſes. After Hippocrates, Van Helmont, under the whimſical appellation of Archeus, aſſerted more directly the dominion of the ſentient principle. He has indeed applied its operations more particularly to aſſiſt him in explaining the theory of fevers; but it has been a misfortune that the opinions of this authour have been generally leſs attended to, than perhaps they deſerve: ſo that it has been cuſtomary to conſider, the celebrated Hoffman as the firſt, who ſuggeſted the idea, that the proximate cauſe of fever depends on a derangement or affection of the nervous ſyſtem; at leaſt he is the firſt, who delivered a ſyſtem on the ſubject, which can in any degree be conſidered as rational and conſiſtent.

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It will not be an eaſy taſk, to give a clear and diſtinct view of that, which has been conſidered by the ancients, as the proximate or immediate cauſe of fevers. The language of the earlieſt writers is not by any means preciſe in this reſpect; and we ſhall frequently, perhaps, have difficulty from the ambiguity of expreſſion, to diſtinguiſh from each other the definition, the remote and occaſional, or the immediate and proximate cauſe of the diſeaſe. The proximate cauſe of a diſeaſe, it muſt be remembered, is a cauſe which conſtantly and uniformly produces its reſpective complaint; and without which this complaint cannot even for a moment exiſt. It is, in ſhort, the firſt eſſential derangement, which the action of this cauſe produces in the frame of the ſufferer: but though we know this to be certainly true; yet we have made no progreſs in diſcovering the nature of this derangement.--The firſt action of the cauſe of fever is obſcure, and ſome part of the derangement which it occaſions, has hitherto probably paſſed over unnoticed, even by the moſt accurate obſervers.

If we attempt to give a view of the ſucceſſive conjectures, which, at different times, have been offered to the public concerning the proximate cauſe of fevers, it will be neceſſary

ceſſary to begin with Hippocrates. (1) We may collect very clearly from the writings of this authour, that an increaſe of the heat of the body had afforded, to the ſtill more ancient phyſicians, the firſt idea of the eſſence or immediate cauſe of fevers. This ſeems to have been the idea of the moſt ancient profeſſors of medicine. Hippocrates in ſome degree ſubſcribed to it; yet this authour ſeems likewiſe to doubt, if the ſimple increaſe of heat alone is ſufficient to conſtitute a proper fever, or that it can with propriety be conſidered as the eſſential proximate cauſe of the diſeaſe. But though Hippocrates raiſes this objection to the common opinion, concerning heat; yet he ſtill leaves us in doubt with regard to the opinion which we ought to adopt. His ideas are fluctuating and uncertain. We find in the different parts of his works, obſtruction, plethora, miaſmata or bile, all ſeparately conſidered, as immediate cauſes of fever. But ſuch cauſes I may add, where they do take place, are in fact only more remote or diſtant cauſes. Neither miaſmata, bile nor obſtruction, are circumſtances on which the exiſtence of fever invariably and neceſſarily depends; at leaſt ſuch cauſes require to be in a certain ſtate of modification, which is yet undefined, before they are capable

pable of actually producing the diſeaſe. B
bears a very conſpicuous part in the Hipp
cratic doctrine of fevers. The fabric, inde
which our authour raiſes on this principle,
fanciful, and, in many reſpects, ill founde
yet, as modified by the fertile genius of Gal
it paſſed on through a ſucceſſion of ma
ages: nor is it, even now, altogether baniſh
from the language of practitioners.

Such are the hints concerning the cauſes
fevers, which I have been able to colle
from the writings of Hippocrates. The e
preſſions are often obſcure or equivocal; a
we can ſcarcely ſay, that an opinion can b
formed from them, which deſerves the nam
of a theory. The ſucceſſors of this gre
phyſician were, perhaps, ſoon ſenſible of th
defect; and therefore attempted to fabrica
other opinions, which might be more expli
cit and diſtinct. Among the firſt of thoſe at-
tempts, we may reckon the hypotheſis o
Diocles of Caryſtus, a phyſician who lived
at an early period, and who was highly eſ-
teemed by his contemporaries. (2) Fever, ac-
cording to this authour, is not ſo much a pri-
mary diſeaſe, as a ſymptom of ſome other af-
fection. Wounds, tumours, and many other
accidental cauſes, have certainly been ob-
ſerved to give riſe to ſymptoms which have
been

been uſually denominated fever; yet neither wounds nor inflammations have been generally obſerved to give riſe to a proper fever. I will not however deny, that wounds, or inflammations, occaſionally prove exciting cauſes of proper fever, where there is a ſtrong diſpoſition to the diſeaſe, exiſting in the conſtitution, at the time thoſe accidents have happened.--It does not appear that this theory of Diocles gained much ground with ſucceeding writers; yet it was, perhaps, the cauſe of introducing the diſtinction of primary and ſymptomatic into the hiſtory of fevers; a diſtinction, which is frequently of conſequence in practice. But I muſt further add, that though the opinion of Diocles is not admiſſible in its literal meaning; yet, in a modified ſenſe, it is not altogether without foundation. The ſymptoms of fevers are undoubtedly indications of a derangement of the body from its healthy ſtate; but when we have ſaid this, we can ſay no more.--The nature of the derangement, which in its firſt beginnings is not obvious to the ſenſes, neither the ancients, nor the writers of the preſent age have, as yet, been able to aſcertain.

Not very long after Diocles, Eraſiſtratus, a native of the iſland of Cea, and phyſician at the court of Antigonus, furniſhed a conjecture

jecture concerning the cauſe of fevers, which is mentioned both by Celſus and Galen, and which appears to have originated in his anatomical reſearches. As Eraſiſtratus directed his purſuits particularly to the ſanguiferous ſyſtem; ſo impreſſed, perhaps, with an idea of the ſuperior importance of that part of the body on which his thoughts had been chiefly employed, he ventures to hazard the opinion, (3) That the immediate cauſe of fever depends on a certain error loci, or transfuſion of the red blood into the arterial channels: and this, he moreover adds, proceeds from repletion.---The opinion originates from an anatomical error; and on that account need not detain us any longer.

The next authour, of whoſe opinion on this ſubject any diſtinct traces have been tranſmitted to us, is Aſclepiades, the Bythinian, a man who ſeldom treats the doctrines of his predeceſſors with reſpect. In his rage for innovation, Aſclepiades attempted to change or modify the theories of thoſe who had gone before him, in ſuch manner, as to hope to impoſe a conjecture on the world, which might, at leaſt poſſeſs ſome exterior claims of novelty. (4) He allows with the moſt ancient phyſicians, that the inſeparable ſign of fever, or its eſſential part, conſiſts in an exceſs

of

of heat; but having adopted the doctrine of atoms, which was conveyed to the Greeks by Democritus of Abdera, he pretends to account for the difference of types by a difference in the ſize of the corpuſcles, which he ſuppoſes to be formed by a combination of indiviſible atoms. Thus we ſee that obſtruction in the permeable canals of the body, in this writer's opinion, conſtitutes the theory of the proximate cauſe of fever: on which principle we may likewiſe conclude, that the modern doctrine of lentor and viſcidity has built its foundation.

The authour, whom I have laſt mentioned, may actually be conſidered as the original founder of the methodic ſect. The principal tenets of this ſect of phyſicians have been tranſmitted to us by Celſus, Cælius Aurelianus, or Galen; but the doctrines, which they promulgated, have not been very fully and perfectly explained. The great diviſion of Themiſon, into ſtrictum et laxum, furniſhes a very ſimple view of diſeaſes. Fevers are included in the firſt order of derangement; and in this reſpect, may be conſidered as depending on a cauſe ſimilar to the obſtruction obſcurely hinted by Hippocrates, or more explicitly deſcribed by Aſclepiades. There is this difference, however, between theſe

theſe reſpective opinions, that the earlieſt writers ſeem to have referred the obſtruction to ſome change in the humours or circulating maſs; while the *methodics* appear to have attributed it more directly, to a change in the capacity of the containing veſſels. Hence we may infer, without any improper latitude of interpretation, that the ſtrictum of Themiſon and Theſſalus comprehends the ſpaſmodic conſtruction of capillaries, which has lately made ſo conſpicuous a part in the theory of febrile diſeaſes. This theory of the methodics, where the nervous and fibrous ſyſtem have been more regarded than the humours, or circulating maſs of fluids, was principally followed at Rome, for more than a hundred years. At laſt Galen, who was a very unqualified admirer of Hippocrates, exerted himſelf ſo ſucceſsfully in reviving the humoral doctrine of his maſter, that the methodic ſect began to ſink rapidly into decay; and after a ſhort time its traces were totally obliterated.

The frequent blanks, in medical hiſtory, make it no eaſy taſk to give a connected view of the fluctuating ſyſtems of the ancient phyſicians. The works of every writer of the methodic ſect have periſhed, except thoſe of Cælius Aurelianus: neither have we been able to diſcover any new opinion, or modification

cation of opinion, concerning the proximate cauſe of fevers, between the time of Aſclepiades or Themiſon and the great commentator of Hippocrates, except that of Athenæus. Athenæus, who was the head of the ſect of Pneumatics, ſtood high in eſteem among his contemporaries and ſucceſſors. This authour ventured to ſuggeſt a new hypotheſis, or more properly perhaps, only extended, and more fully explained a doctrine, of which the obſcure traces may be diſcovered at an earlier date. (5) The general cauſe of fever, in this writer's opinion, conſiſts in a putrefaction, or putreſcent ſtate of the humours. Hippocrates ſeems to have entertained ſome indiſtinct idea of the ſame kind; and thoſe, who have been inclined to this way of thinking, both in ancient and in modern times, have neither been few in numbers, nor contemptible in authority.

Galen, who has written on moſt parts of medical ſcience more learnedly than his predeceſſors, has diſcuſſed very fully the ſubject of the proximate cauſe of fevers. Amidſt the luxuriance of this authour's colouring, it is ſometimes difficult to lay hold of the preciſe idea; at the ſame time, that it is oftener tedious than inſtructing, to follow him thro' the maze of his fanciful and inconcluſive rea-

ſonings. I ſhall not therefore enter into a minute detail of his arguments; but ſtill I conceive it may be uſeful, particularly to thoſe who have not the opportunity of conſulting his voluminous, and in ſome reſpects ill digeſted works, if I compreſs into narrow compaſs the leading principles of his general doctrines. In the firſt place, the opinion, hinted by Hippocrates and adopted by moſt of his ſucceſſors, that the eſſence of fever conſiſts in a certain derangement of heat, is expreſsly maintained by Galen, who explains more elaborately than his predeceſſors the various circumſtances, which influence or modify this general cauſe of the diſeaſe. (6) Galen aſſumes, indeed, as a fundamental poſition, that heat any how, or any where excited, communicated to the heart, and from the heart to the reſt of the body, conſtitutes a fever; yet he afterwards adds more explicitly, that a preternatural heat does not conſtitute a fever, unleſs it is communicated to the heart; which is conſequently to be conſidered as the principal ſeat and reſidence of the febrile affection. Having, as he imagines, eſtabliſhed this fundamental principle, he proceeds to inveſtigate, more particularly, the parts of the body where the heat reſides, and the cauſes by which it is generated, propagated,

pagated, or ſo modified, as to produce the diſeaſe in its different forms. But, that he may the better explain his meaning clearly, he divides fevers into three different kinds: viz. the hectic, or habitual, the humoural, and the ephemeral. The firſt he ſuppoſes to ariſe from an affection of the ſolids, or containing parts; the ſecond from ſome derangement of the fluids, or contained parts; and the third from ſome diſturbance of the ſpirits, or that part of the frame which we, perhaps, now diſtinguiſh by the name of nervous ſyſtem. He adds in the next place, that putrefaction is the medium, by which fever is excited, where the fluids or humours are the ſubject of the diſeaſe, contiguity and continuity, where the illneſs affects the habit or ſolid parts; and where the effects are tranſitory and fleeting, he attributes the cauſe principally to the rapid movements of the ſpirits, or nervous influence. And laſtly, he attempts to complete his theory, by explaining the different types of humoural fevers, on the ſuppoſition of a ſtate of putrefaction in the different humours, from which he ſuppoſes the diſeaſe to ariſe. On this ſubject he has deviated very materially from his maſter Hippocrates, though he probably drew his ideas from the hints, which are found in that au-

thour's works. Hippocrates explains, or attempts to explain the various types of fevers, by a ſimple difference in the quantity of the bile. Galen, on the contrary, as we have ſaid juſt now, endeavours to account for this phenomenon, by a ſuppoſition of putrefaction in the phlegmatic and bilious humours, which bear ſo conſpicuous a part in his theoretical ſyſtem. Thus Galen ſuppoſes, that a putreſcent tendency in the blood gives riſe to a continued fever; a ſimilar diſpoſition in the phlegm diſpoſes the diſeaſe to appear in a quotidian form: putrefaction of the yellow bile determines the type to be of the tertian kind; whilſt a like tendency, in the black bile, regulates the movements of the quartan period.--It is unneceſſary to make any remarks on the baſeleſs fabric, which this author has offered to the world, concerning the proximate cauſe of fevers.--Its inconſiſtency and inſufficiency are perfectly obvious.

After the time of Galen there does not appear to have been any material change, in the manner of accounting for fevers, for many ages. Aetius Amidenus indeed ſuggeſted ſome reſtrictions and explanations in a certain ſpecies of fever, which do not ſeem to have been ſo explicitly marked by the commentator of Hippocrates. Inſtead of conſidering

ſidering putrefaction as the ſole means of exciting heat in every ſpecies of humoural fever, (7) Aetius ventures to inſinuate, that there is no ſtate of actual putrefaction in the ἄνοχος, or that ſpecies of diſeaſe which is purely inflammatory, the cauſe of which appears to be ſimply an inordinate fermentation or ebullition of the blood. But except in this inſtance, the ſucceeding Greek phyſicians do not ſeem to have departed, in the leaſt, from the direct footſteps of Galen. The Arabians likewiſe, among the principal of whom we may reckon Avicenna, adopted his general doctrines, and modes of reaſoning, only (8) Avicenna defines more expreſsly than others had done before him, that fevers of all denominations ariſe immediately from a preternatural heat of the heart; in doing which, he ſeems to have extended the influence and power of that quality which preceding authours in looſer terms had conſidered as the general cauſe of febrile diſeaſes.

The doctrines of Galen, with ſome immaterial innovations of the Arabian phyſicians, wholly occupied the ſchools of medicine, till the beginning of the ſixteenth century, about which time Aureolus Philippus Theophraſtus, commonly known by the name of Paracelſus, effected a revolution of opinions, which marks

an important period in the hiſtory of the medical art. Paracelſus, who was a man of a ſingular turn of mind, ſpent the earlier part of his life in travelling among the nations of Aſia; where he probably acquired ſome knowledge of chemiſtry, in which ſcience the Arabians appear, even at that time, to have made conſiderable progreſs. The knowledge, which Paracelſus carried home to his native country, was not generally known in Europe. This authour applied it with ſucceſs in the cure of ſome deſperate diſeaſes; and acquired uncommon fame from his new and unheard-of remedies. He was an empiric in the theory, no leſs than in the practice of the art; and I may add, that his attempts to overturn the doctrines of the ancients, give an indication of more effrontery than genius or knowledge. The wonderful cures of obſtinate diſeaſes, which he was ſaid to perform; and ſtill more, perhaps, the myſterioufneſs of his language, which caught the notice of the vulgar, who often imagine that knowledge is concealed under terms, which they do not underſtand, brought followers to his ſtandard. Theories of the proximate cauſe of fevers, were fabricated without difficulty, by the help of thoſe principles, which Paracelſus had introduced to the acquaintance of the world; yet it does not

not appear, that any theory aroſe, during this period, which had probability, or even ingenuity for its ſupport. The period indeed, during which chemical reaſonings ſo univerſally prevailed, may be ſtyled juſtly enough a period of medical romance: and I ſhould conſider it as a treſpaſs on the patience and good ſenſe of the reader, to ſpend time in refuting the abſurd and incongruous doctrines of ſulphur, nitre or mercury; acid and alkali, or the various modes of fermentations, which for a time filled the writings of phyſicians. The mechanical mode of reaſoning, which ſucceeded, or rather which became incorporated with the doctrines of the chemiſts, ſeemed at firſt to promiſe greater advantages: but though theories of fevers were formed by many eminent men, both of the laſt and preſent century, on the principles of the mechanical or chemico-mechanical philoſophy; yet there are not any of them, which ſeem to have afforded a ſatisfactory explanation of the ſubject.--The ſo-much celebrated doctrine of lentor and viſcidity was aſſumed without evidence of its exiſtence, and perſiſted in, without being ſufficient to account for the phenomena of the diſeaſe.

Thoſe conjectures concerning the proximate cauſe of fevers, which I have mentioned

hitherto, can ſeldom be ſaid to extend farther than to a particular ſtate of the humours, or circulating maſs of fluids, which, according to the prevailing philoſophy of different ages, have been ſuppoſed to be changed from their natural and healthy ſtate, by chemical or mechanical derangement. I obſerved before, that it might appear, from an accidental expreſſion in the writings of Hippocrates, that this authour was not altogether ignorant of the influence or effects of a nervous power, or ſentient principle. The methodic ſect likewiſe, may ſeem to have comprehended in the idea which they have given of diſeaſes, that there is ſome derangement of the fibrous ſyſtem; or perhaps that a ſpaſmodic ſtricture of capillaries is actually the immediate cauſe of fever; whilſt Galen every where celebrates the powers of nature or vires naturæ medicatrices, which bear in his opinion, a very active part in the cure of febrile diſeaſes. To thoſe vague ideas of the ancients, we may add the more modern and explicit doctrine of Van Helmont, who was a man of genius, learning and obſervation. Van Helmont adopted the ſentient principle of Hippocrates; but he alſo applied it in a bolder light than had been done by its original authour, and employed its aſſertions more particularly towards the expla-

explanation of the cauſe and phenomena of fevers. The enthuſiaſm of this writer diſguſts the philoſophic ſpirit of the preſent age, and we muſt acknowledge, that his ideas are often unphiloſophical and abſurd; yet we muſt likewiſe do him the juſtice to add, that the principle of his doctrine in ſome degree is well founded, and that his views, in many reſpects, are important in practice. I muſt further obſerve, that the efforts of nature, ſo celebrated by Campanella and Sydenham, and even, perhaps, the αυτοκρατια of (9) Stahl and his followers, can only be conſidered as modifications of the furious Archeus.--But though the authours I have mentioned, ſeem evidently to have poſſeſſed ſome vague idea of the powers or influence of the nervous ſyſtem; yet there are not any of them, who have attempted to explain its operations by a philoſophical and conſiſtent mode of reaſoning. The period of this improvement is not very remote.

As ſoon as the circulation of the blood was known and fully eſtabliſhed, the heart loſt ſome part of its former importance; whilſt the brain and nerves, which for many ages had been little regarded, roſe into primary and eſſential conſequence. But though the brain and nerves were diſcovered, ſoon after this period,

period, to be the inſtruments of life and motion; yet the laws of this part of the ſyſtem were at firſt only imperfectly underſtood; and the attempts to explain its operations were, for a while, whimſical and abſurd. Willis deſerves ſome credit, as being one of the firſt who brought the general importance of the nervous ſyſtem into view: but Borelli, an Italian mathematician, actually appears to be the firſt who ventured to aſcribe the proximate cauſe of fever, to a particular derangement of this part of the frame. (10) The immediate cauſe of fever, in this authour's opinion, depends on ſome unuſal acrimony of the nervous fluid; but it is only neceſſary to obſerve with regard to this doctrine, that a ſuppoſition of acrimonious fluids, where a fluid cannot be proved to exiſt, is ſo perfectly viſionary, as only to deſerve to be mentioned, from its being the firſt attempt to bring this part into view, in accounting for febrile diſeaſes. This hypotheſis, however, though obviouſly ill founded, enjoyed its day of fame. It was ſoon followed by another conjecture, more ingenious indeed, but which was not ſo generally attended to, as the preceding. (11) Dr. Cole of Worceſter, towards the end of laſt century, ſuggeſted an idea, that the proximate cauſe of intermitting fevers depends on a laxity or debility

bility of the brain and origin of the nerves. The ſuppoſition is not ſo improbable; but the ſuperſtructure, which the authour has raiſed, is abſurd, and unſupported either by fact or probability. Yet, if we except Mundy, an authour who offered a conjecture of a ſimilar kind, in a work entitled Βιοχημιολογια, Borelli and Cole are the only writers prior to the time of Hoffman, who conſidered the nervous ſyſtem, as directly affording a ſeat for the proximate cauſe of fevers. Hoffman, whom I have juſt mentioned, was a celebrated profeſſor at Halle in Saxony. He flouriſhed in the earlier part of the preſent century, publiſhed many volumes, and certainly poſſeſſes the merit of having enlarged our views on the ſubject of fevers. His theory of the proximate cauſe is not only more ingenious, but certainly has more appearance of truth, than any other, which had been offered to the public at the time it appeared. (12) The cure of fever conſiſts, in his opinion, in a ſpaſmodic affection of the nervous ſyſtem. It is a truth which few people will attempt to deny, that a ſpaſmodic ſtricture of the ſurface of the body generally takes place in ordinary caſes of fever; yet we muſt perhaps alſo acknowledge with Dr. Cullen, that a ſpaſmodic ſtricture is not certainly and uniformly the firſt eſſential

eſſential part of a febrile diſeaſe. Some other thing is frequently obſerved to precede the ſpaſm, which, in the opinion of the laſt mentioned celebrated profeſſor, has a right to be conſidered as a proximate and eſſential cauſe. But as the theory of the proximate cauſe, aſſigned by Dr. Cullen, is not only more plauſible and complete than any preceding one; but ſtill increaſing in popularity and fame, it will not be ſuperfluous, if we ſtop to examine it with more attention. The remote cauſes of fever, according to this authour, are ſedative powers, applied to the nervous ſyſtem, which diminiſhing the energy of the brain, thereby produce a debility in the whole of the functions, and particularly in the action of the extreme veſſels. Such, however, is at the ſame time the nature of the animal economy, that this debility proves an indirect ſtimulus to the ſanguiferous ſyſtem; whence by the intervention of the cold ſtage and ſpaſm connected with it, the action of the heart and larger arteries is increaſed, and continues to be ſo, till it has had the effect of reſtoring the energy of the brain, of exciting this energy to the extreme veſſels, of reſtoring therefore their action; and thereby ſpecially overcoming the ſpaſm affecting them: upon the removing of which, the excretion

of

of ſweat, and other marks of relaxation of excretories take place. This theory of fever holds out an appearance of great ſimplicity, and of perfect connexion. I wiſh we could ſay that it had an equal claim to truth: but I am afraid it will be found, on a careful examination, to be no more in reality than an ingenious hypotheſis, the leading principles of which can ſcarcely be proved even to exiſt. I do not pretend to enter deeply into the diſcuſſion of the ſubject; yet I cannot avoid repreſenting, in a few words, ſome circumſtances of difficulty in this authour's theory, which are not eaſily reconcileable, either with reaſon or obſervation. It might be doubted, in the firſt place, if the remote cauſes of fever are actually of a ſimply ſedative nature; but at preſent I ſhall admit that the firſt principle, which is aſſumed by the profeſſor, is in reality a fact, and proceed to enquire, if the reſt of the doctrine is capable of being defended, even on this foundation. It conſtitutes the ſum of Dr. Cullen's theory, as was mentioned before, that the remote cauſes of fever occaſion debility, or diminiſhed energy of the brain and nervous ſyſtem; that this debility neceſſarily gives riſe to ſpaſm, and increaſed action of the heart and arteries; which continuing for a certain length of time, finally removes

removes the diſeaſe. Thus the different ſtages of fever appear to follow each other as cauſe and effect; and debility in the firſt inſtance, is ſuppoſed neceſſarily to give riſe to reaction. Such a ſuppoſition is not very obvious to reaſon, and has not much ſupport from the analogy of facts. It would be eaſy to mention examples, where the application of debilitating cauſes as is not obſerved to be followed by obvious reaction of the ſyſtem; but at preſent I ſhall content myſelf with the familiar one of the application of cold. It is perfectly well known, that cold, when conſtantly and uniformly applied to the body, even goes ſo far as abſolutely to extinguiſh the powers of life, in a part, or in the whole, without our being able to perceive any efforts on the part of nature to ſtop the progreſs of this deſtructive tendency. From this we may fairly infer, that common debilitating cauſes, at leaſt while they continue to be applied in the ſame conſtant and uniform manner, do not neceſſarily excite the reaction of the ſyſtem: but I will even go farther, and venture to affirm, that ſpaſm and reaction do not neceſſarily follow very great degrees of debility, which appear to proceed from the preſence of a febrile cauſe. During the time I remained in America, I had frequent opportunities of witneſſing the truth

truth of this aſſertion. In the ſouthern provinces of that country, particularly in the ſummer and autumnal months, the intermitting fever was generally epidemic in a high degree; but its general cauſe, which was then ſo abounding in the atmoſphere, often injured the actions of life, without producing a regular train of operation; that is, one part of the diſeaſe appeared without that mode of action, which is ſuppoſed, by our authour, to be its neceſſary effect. Thus, I have ſeen the moſt extreme degrees of debility and langour in all the functions, continue even for eight or ten days, without our being able to diſcover the ſmalleſt marks of ſpaſm, or obvious reaction. This inactivity and langour ſometimes vaniſhed ſuddenly; and the body reſumed its ordinary health and vigour, frequently without an evident cauſe. On the next day, however, or perhaps the day following it, the patient was ſurprized with a regular paroxyſm of fever. From this it appears very plainly, that if the immediate cauſe of fever actually conſiſts in debility, this debility neceſſarily undergoes a peculiar, but hitherto undefined ſpecies of modification, before it can be conſidered as the cauſe of the ſubſequent parts of the diſeaſe;--a conceſſion which

which leaves us perfectly in our former ſtate of uncertainty and ignorance.

As it may be concluded from the facts, which I have mentioned, that ſpaſm and reaction are not the neceſſary conſequences of the application of debilitating cauſes, either common or febrile; ſo if we purſue our authour's train of reaſoning farther, we ſhall not find his inductions to be very conſiſtent, or very convincing. If we are diſpoſed to grant, that the remote cauſes of fever actually diminiſh the energy of the brain, it is not an obvious inference, that the circumſtances of this diminiſhed energy have the certain effect of exciting the reaction of the ſyſtem. It appears, in ſhort, like aſcribing reſt and motion to the ſame power. But to ſmooth the prominent features of this apparent inconſiſtency, the ingenious authour has thought fit to aſſume a principle, the exiſtence of which is very ambiguous in its inlarged ſenſe, and very inſufficient in its limited one. Dr. Cullen does not admit of the Italian principle of αυτοκρατια; he however aſcribes effects to the vis naturæ medicatrix, which are not capable of being explained mechanically. I mentioned before, that no efforts of nature are perceived to ariſe, under the uniform and conſtant application of a debilitating cauſe; but

but though this is true, I muſt likewiſe obſerve, that when theſe debilitating powers, from any cauſe whatever, actually ceaſe to act, abate materially in the intenſity of their action, or ſuffer change in its mode, before the vital principle is irrecoverably deſtroyed, nature, which perſiſts in continuing life, and even ſtruggles in attempting to maintain it, may then be ſaid to raiſe efforts, which have a tendency to reſtore the body to its ordinary health. This power, which to a certain degree, reſiſts cauſes of a deſtructive tendency and which endeavours to reſtore to their original ſtate the derangements of the ſyſtem which have actually taken place, is only a limited degree of the vis naturæ medicatrix. It is in ſhort, no more than an effort to continue the action of living; yet it is all, which we ſhall, at any time, perhaps, be able to perceive.

I have thus mentioned briefly ſome objections, to this celebrated theory of Dr. Cullen. The ingenuity of the authour is acknowledged to be great; the pains and labour, which he has beſtowed in completing his favourite doctrine appear likewiſe to be conſiderable; yet I cannot help remarking, that its defects are ſtill ſo obvious, that we are unavoidably obliged to be ſatisfied with one of theſe con-

cluſions: viz. either that the debility, which is ſuppoſed to be the cauſe of fever, is of a peculiar but unknown kind; that it ceaſes to act, or changes its mode of action from an accidental cauſe, or from ſomething in its own nature; or that a reaction ariſes in the ſyſtem, from a principle of conſciouſneſs of the deſtructive tendency of this debilitating power. It is not conſonant with the common laws of the animal economy, that reaction ſhould ariſe in that part of the ſyſtem, where the debilitating influence has been primarily and principally exerted. Suppoſitions of this nature, are only ſubterfuges, and no more in reality than myſterious ways of acknowledging ignorance.

The opinions I have enumerated above are the principal ones, which have been advanced by medical writers, on the ſubject of the proximate cauſe of fevers. Though numerous, they are all reducible to two general claſſes; viz. either to conjectures, which are totally without foundation; or to circumſtances, which are in fact only ſymptoms or parts of the diſeaſe, ſome of which are more, others leſs eſſential. The proximate cauſe of fever, is a certain peculiar ſtate of the body, on which the diſeaſe, or the ſubſequent parts of the diſeaſe, neceſſarily depend. It is, in ſhort,

ſhort, the firſt eſſential action of the febrile cauſe; but this action is ſo intricate and difficult to be diſcovered, that phyſicians have ſought for it in vain for more than two thouſand years. The ancients were ſatisfied with the idea of preternatural heat, excited in the heart, and communicated, by means of the blood and ſpirits, to the reſt of the body. Hoffman, making a bolder ſtep, introduces a ſpaſmodic affection of the moving fibres; and Dr. Cullen, going ſtill farther, lays the principal ſtreſs upon langour and debility, or weakened action of the nervous energy. Increaſed heat, ſpaſmodic ſtricture and marks of debility are generally preſent, in various degrees, in the different ſtages of fever; but debility for the moſt part precedes the others; and on this account, if equally eſſential, has a preferable right to be conſidered as the firſt part of the diſeaſe. There is ſtill reaſon to doubt if it actually is the firſt. I have myſelf attended carefully to the manner in which intermitting fevers approach. The firſt thing which I obſerved in others, or what is ſtill more to be depended upon, the firſt thing I felt in myſelf, was uſually a diſagreeable, but a peculiar affection of the ſtomach. The preciſe nature of this affection I am unable to define in words; but I knew it ſo

well by experience, that I always conſidered it as a warning, (and it was ſometimes the only warning which I had,) of the approach of the paroxyſm. It was often accompanied by flatulence, and it ſometimes preceded the firſt feelings of the langour and debility, nearly the ſpace of an hour. The obſervation of this fact has occurred to me frequently; and I cannot avoid concluding, that it gives room to believe, that the debility, which is ſo commonly the fore-runner of fever, inſtead of being the firſt and principal mode of action of the febrile cauſe, is only a part of that action,--perhaps not the moſt eſſential. As Hippocrates appears at a very early period to have been perfectly ſenſible, that ſomething beſides a ſimple increaſe of heat was neceſſary to conſtitute a fever; ſo we may now perhaps conclude, with equal reaſon, that debility has ſome other circumſtances combined with it, which we have not been able to diſcern very clearly.

Having ſaid that there are not any of the numerous theories, which have as yet been offered to the public on this important ſubject, in any degree ſatisfactory, it might be expected, perhaps, that I had ſomething of my own to bring forward, which might be more perfect, at leaſt in my own opinion: but I wil-

I willingly acknowledge, that I have no ſuch pretenſions. After fourteen or fifteen years of careful obſervation, and daily reflexion on the phenomena of fevers, I am obliged to confeſs, that my opinion ſtill remains to be formed. The proximate cauſe of this diſeaſe, is a ſubject of a dark nature. It is ſuch, perhaps, as our limited capacities will never develope. But though we deſpair of ever attaining clear ideas of its ſpecific nature; there are ſtill ſome uſeful circumſtances connected with it, which we comprehend with clearneſs. We know, that the more general remote cauſes of fevers, are certain inviſible exhalations, ſometimes more evidently ariſing from marſhy grounds, ſometimes more obſcurely diffuſed in the air, and ſometimes obviouſly proceeding from the bodies of our fellow creatures. We know likewiſe, that theſe cauſes, which are unfriendly to the human conſtitution, are variouſly modified and combined, and of various degrees of force or in various ſtates of concentration; but we proceed no farther with certainty. We are not able to aſcertain the nature of theſe effluvia; and it is only by conjecture, that we trace them in the channels by which they enter the body. The changes which they operate on the ſolids, fluids, or nervous ſyſ-

tem, before their action becomes obvious, are totally unknown to us. We know, though the body lie expoſed to exhalation, even in a concentrated ſtate, that an appearance of diſeaſe is not, generally, the inſtantaneous conſequence. A ſpace of time intervenes, various indeed according to circumſtances, but always ſuch as gives room to believe, that the cauſe requires, and actually undergoes a modification, before it is capable of producing a fever, or the paroxyſm of a fever. The circumſtances connected with the approach of fevers, particularly intermitting fevers, afford an illuſtration of my meaning. The cauſe of the diſeaſe, ſo far from producing the fever immediately when applied to the body, often lurks for a conſiderable time in the conſtitution, without perceptibly injuring the ordinary actions of life. Sometimes it gives riſe to affections, which are apparently very different from their real nature. Thus a perſon often languiſhes for days, weeks, or even longer. The indiſpoſition ſuddenly and unexpectedly vaniſhes; and the apparent recovery of health is ſoon followed by a paroxyſm of regular fever. In other caſes again, the attack of the diſeaſe is ſudden; and its formation from the beginning diſtinct. This fact affords a preſumption, that, in conſequence of

of a particular modification, which is only accompliſhed in a certain ſpace of time, but the nature of which we do not in the leaſt comprehend, an aptitude is generated between the remote cauſe of the diſeaſe, and the relative ſtate of the body. When the ſtate of the body, and the remote cauſe approach to, or arrive at a ſtate of mutual correſpondence, the diſeaſe is produced. When this ſtate, which I call an aptitude, is changed or deſtroyed, the diſeaſe vaniſhes, or ſuffers a change of form. This is a fact, which cannot be diſputed; and it ſeems to be the extent of our knowledge, on the important ſubject of the proximate cauſe of fevers.

CHAP. VI.

OF THE GENERAL HISTORY OF THE FEVER OF JAMAICA.

IT will not be improper to remark, before I begin to deſcribe the hiſtory of this fever, that though the endemic which prevailed at Savanna la Mar, notwithſtanding much variety of form and ſymptoms, is conſidered as only one and the ſame diſeaſe, yet it may alſo be obſerved, that the variety of theſe appearances is ſometimes ſo great and remarkable as to occaſion conſiderable perplexity to the practitioner. The ſymptoms and form of this endemic appeared, on a ſuperficial view, to be conſtantly varying; yet by attending more cloſely to the courſe, progreſs and changes of the diſeaſe, theſe apparent irregularities vaniſhed gradually, the varieties being in fact only accidental, and often depending on very trivial cauſes. The analyſis of the different caſes of fever, which came under my care, during the time that I lived in Jamaica, furniſhed me with this information. I formerly mentioned the manner in which my

my obſervations were conducted: I have only now to add, that I truſt the method, which I adopted, has enabled me to give a more accurate hiſtory of the fever of Jamaica, and to explain more ſatisfactorily than has been done hitherto the various ſources of the many irregularities, which are obſerved to occur. I am perfectly ſenſible that my experience has been too limited, to give me hopes of rendering the preſent work complete; yet I would flatter myſelf, that it will not be altogether uſeleſs: I totally diſclaim theoretical opinions, and content myſelf with a plain narrative of facts; neither do I aſpire to any higher praiſe, than care in obſerving the appearances of the diſeaſe, and truth in relating the appearances which I have ſeen.

Before proceeding to give a particular hiſtory of the different varieties of the endemic fever of Jamaica, it will not be improper to mention the more general ſymptoms, which diſtinguiſh the diſeaſe, and to trace an outline of the courſe, which it has been commonly obſerved to purſue: and I may remark in the firſt place, that though debility is uſually conſidered as the firſt ſign of an approaching fever; yet, if we attend minutely to all the circumſtances of invaſion, it will not generally be difficult to perceive, that a diſagreeable,

able, though undeſcribable affection of the ſtomach, takes place previous to the ſmalleſt perceptions of languor or debility, which are commonly only immediate fore-runners of coldneſs and ſhivering. This coldneſs, which was obſerved to be various in duration, as well as in degree of force in the fevers of this country, was ſucceeded by fluſhings of heat alternating with the cold, and increaſing gradually till the heat at laſt prevailed. The hot fit, which was likewiſe of various duration and of various force, had many new ſymptoms joined with it, the principal of which were ſuch as ſhewed an increaſed circulation, or an irregular determination of the blood to the different parts of the body. This hot fit, and the diſturbances connected with it, according to circumſtances, continued for a longer or ſhorter ſpace of time; at laſt ſweat breaking out on the head and breaſt, extended itſelf gradually to the extremities, and accompliſhed after a certain continuance, either a total remiſſion of the fever, or a conſiderable abatement of the violence of the ſymptoms. It is almoſt unneceſſary to mention, that this remiſſion or abatement of ſymptoms was of longer or ſhorter duration, and more or leſs complete in fevers of different forms. An aggravation of ſymptoms ſucceeded to the remiſſion;

miſſion; but it was uſually obſerved to begin without preceding coldneſs, and frequently without marks of preceding languor or debility. The hot fit now ran high, and all the ſymptoms were frequently more violent than they had been obſerved to be in the firſt paroxyſm. Sweat at laſt made its appearance, followed in moſt caſes by a remiſſion, leſs perfect indeed than the preceding one, but ſtill diſtinct enough to be clearly traced. In this manner things went on for a longer or ſhorter ſpace of time, the paroxyſms uſually increaſing in violence, and the remiſſions becoming ſometimes more, though in general leſs perfect, as the diſeaſe advanced in its progreſs. I may further obſerve, that there was occaſionally a change of the type, ſometimes a change of the nature of the ſymptoms in the courſe of the illneſs; and that, where either of theſe were the caſe, the diſeaſe was uſually of longer continuance; at the ſame time, that the order of the critical days was diſturbed in conſequence of theſe changes.

The reſemblances, which I have mentioned above, were found in all the different ſpecies of the remitting fever of Jamaica; but from cauſes, which were not always perceived, and which ſometimes appeared to be very accidental, the diſeaſe was diſtinguiſhed in a part,

or

or in the whole of its courſe, by the prevalence of a train of ſymptoms of ſuch a particular nature, as gave occaſion to the diſtinctions of inflammatory, nervous, malignant, putrid or bilious; the ſeparate hiſtories of which I ſhall now relate more circumſtantially.

SECTION I.

OF FEVER DISTINGUISHED BY SYMPTOMS OF INFLAMMATORY DIATHESIS.

THE variety of fever, which I ſhall deſcribe firſt, is that, where the inflammatory diatheſis prevailed in different degrees. Where this diatheſis was moderate, the diſeaſe was uſually of the leaſt complicated form, as well as of the leaſt dangerous nature, of any of the fevers of Jamaica. The paroxyſms were generally regular, and complete in all their parts, and terminated, for the moſt part, by a copious ſweat, in a perfect remiſſion: the pulſe was full, ſtrong and regular; without uncommon hardneſs or tenſion; whilſt the heat of the ſkin, though ſometimes great in degree,

legree, was generally free from that burning
ungency, ſo common in ſome other ſpecies
f fever. It was leſs removed, in ſhort, from
a ſimple increaſe of the natural warmth. I
ay further remark, where this moderate
legree of inflammatory diatheſis characterized
he genius of the diſeaſe, that the danger was
ſeldom great;--and that the termination or
criſis was generally regular and final. But
though this degree of the inflammatory dia-
theſis was frequently obſerved to be a ſign of
ſafety, and of regular criſis; yet it alſo often
happened, where the diatheſis prevailed in
exceſs, that the ſymptoms of excitement ran
unuſually high, and that a ſerious danger
threatened life. The pulſe, in ſuch caſes, was
not only frequent during the paroxyſm; but
it was likewiſe quick, hard and vibrating;
the heat was often intenſe; the internal func-
tions and the various ſecretions, were con-
ſiderably diſordered; at the ſame time, that
a very obſtinate ſpaſmodic ſtricture prevailed
on the ſurface of the body. The remiſſion
which followed, for the moſt part, was ob-
cure; the pulſe frequently retaining a preter-
natural quickneſs and hardneſs; whilſt there
as generally a conſiderable degree of febrile
eat on the ſkin.

The

The ſymptoms, which I have juſt no mentioned, indicate different degrees of t real inflammatory diatheſis; but beſides a tual ſymptoms of real inflammatory diathe there were likewiſe found fevers, with t appearances of a ſimilar diſpoſition, thou the real genius of the diſeaſe was in reality a different nature. It is of importance in practice to diſtinguiſh thoſe ambiguous appearances; but it is not always eaſy to do it with certainty. We may remark, however, that the apparent inflammatory diatheſis wa uſually accompanied with marks of great irritability, and ſometimes with marks of violent excitement during the paroxyſms; while languor and great depreſſion of ſpirit were frequently perceived to attend the remiſſions. The pulſe, which at one time was hard, irregular, and quick, at another was frequent and low, and ſunk under a ſmall degree of preſſure. The heat of the body was not always great, yet it was pungent,--and left a diſagreeable ſenſation on the hand: the ſecretions were often irregular; the countenance was confuſed, clouded and overcaſt, the eye was ſad, and ſometimes appeared as if it were inflamed; the feelings were unpleaſant to the patient himſelf: there was great irritability of temper; and the ſtate of the ſkin impreſſed

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us with the idea, that there was a ſtrong ſpaſmodic ſtricture prevailing on the ſurface of the body.--The above are the principal circumſtances, which were uſually preſent in the different ſtates of inflammatory fevers; yet theſe circumſtances were ſometimes ſo variouſly complicated and combined with others, that the accurate diſcrimination of them muſt be left, in moſt caſes, to the obſervation of the individual himſelf.

Thoſe different ſtates and degrees of the inflammatory diatheſis, which I have deſcribed above, were ſometimes general throughout the whole of the body, not affecting one member more remarkably than another; ſometimes they were partial or ſeemed to be connected with a principal affection of a particular part: and where this was the caſe, the local affecton, and the general diatheſis of the ſyſtem, uſually had a mutual correſpondence with each other. Thus, where the inflammation affected the ſubſtance of the liver or lungs, the general inflammatory diatheſis was uſually in a moderate degree; while the higheſt exceſs of general vaſcular excitement often accompanied inflammations of the membranes of thoſe organs. But though inflammation of membranes was often accompanied with a high degree of general inflammatory diatheſis; yet

yet there were likewiſe ſome kinds of thoſe local inflammations, which communicated only a low, or an ambiguous degree of their diatheſis to the general ſyſtem: ſuch are ſome of thoſe inflammations, which occaſionally affect the ſurface of the alimentary canal, and which appear, in general, to be of the erysipelatic kind.

SECTION II.

OF FEVER WITH SYMPTOMS OF NERVOUS AFFECTION.

THE endemic fever of Jamaica, was not oftener diſtinguiſhed by ſymptoms of general inflammatory diatheſis, than by circumſtances of nervous affection. The beginning of this form of the diſeaſe, was often characterized by a high degree of that diſagreeable affection of the ſtomach, as alſo by much of that languor and debility, which are commonly fore-runners of fevers in general. To theſe ſymptoms ſucceeded a ſlight degree of chilline ſs, followed by a hot fit, which often continued long, but ſeldom ran high. The pulſe

pulſe was ſmall, frequent, and eaſily compreſſed. It varied with change of poſture;--and ſometimes was ſo much affected when the patient was raiſed upright, as totally to diſappear; the heat of the body was ſeldom great; the ſecretions and exertions were generally irregular, and the internal functions were much diſordered. The mind was uſually affected, affected however in various degrees, and in various ways. Sometimes there was a lively delirium, ſometimes the delirium was low and deſponding; and, as the one or other of theſe was the caſe, the appearance of the eye and countenance was chearful or ſad. The tongue was ſometimes moiſt, ſometimes dry, but ſeldom very foul; thirſt was irregular, nauſea was frequent, and the ſtate of the ſtomach was generally very irritable. There was likewiſe, in moſt caſes, deep and heavy ſighing, and, unleſs in times of preternatural excitement, a very uncommon degree of deſpondency. The above were the principal ſymptoms of the nervous fever of Jamaica. The paroxyſms in this diſeaſe ſeldom exceeded twelve hours in duration; while the termination or abatement, was uſually diſtinguiſhed by ſweating, though ſeldom by ſuch ſweatings as extended completely to every part of the body. The remiſſions were not

by any means perfect: the head-ach, and other diſagreeable feelings uſually abated; but ſigns of languor ſtill continued, and marks of ſpaſmodic ſtricture for the moſt part remained on the ſurface of the ſkin. I may further obſerve, that as the paroxyſms generally increaſed in violence, in the progreſs of the fever; ſo it was very ſeldom that the remiſſions put on an appearance of greater diſtinctneſs, as the diſeaſe approached to its termination.

Such is the general hiſtory and the progreſs of the diſeaſe, which might be diſtinguiſhed by the name of the nervous fever of Jamaica: but beſides thoſe circumſtances, which I have mentioned above, others were ſometimes found attending it, which, though leſs regular and conſtant, deſerve ſtill to be taken notice of. Thus the firſt ſtage of the paroxyſm, inſtead of the more uſual appearances, was occaſionally diſtinguiſhed by fits, which appeared to be of the epileptic kind. Theſe fits in ſome caſes were ſucceeded by a lively delirium, in others by ſtupor or inſenſibility. The delirium, which was a common ſymptom of this diſeaſe, ran high in ſeveral inſtances; though it more generally amounted only to an abſence of thought, or difficulty of recollection. It is a circumſtance of ſome curioſity likewiſe, that inſtead of a paroxyſm, conſiſting

conſiſting of different parts in a certain order of ſucceſſion, there was ſometimes a total ſtupor and inſenſibility, which continued for a determinate ſpace of time, without even being ſucceeded by obvious marks of fever: whilſt the time of the paroxyſm, in other caſes, was diſtinguiſhed by ſuch a degree of tremor and mobility, as nearly approached to the diſeaſe known by the name of St. Vitus's dance. And further, beſides theſe ſtrange and irregular appearances, ſpaſms and excruciating pains in different parts of the body, in many inſtances, were the leading, indeed almoſt the only ſymptoms of the diſeaſe.

It is not only curious, but it is indiſpenſably neceſſary in the conduct of our practice, to obſerve with attention the various modes of action of the cauſe of fevers, and to eſtimate with preciſion the various combinations. The cauſe of fevers, in exerting its principal action on the nervous ſyſtem, ſometimes produces excitement, ſometimes occaſions depreſſion; effects oppoſite to each other in their nature. Excitement and depreſſion are two general and oppoſite modes of action; yet beſides theſe we often obſerve others, which do not belong wholly to the one or the other, but which ſeem to be compounded of both, in a manner we do not very well comprehend.

This cauſe of fever likewiſe, which acts in directly oppoſite ways, appears alſo to exert its action more powerfully at different times on one part of the ſyſtem than on another; that is, it acts ſometimes more immediately on the brain, or reaſoning faculty, ſometimes more directly on the nerves, or moving powers of the body. It may even be obſerved further, that all theſe modes of action, which are preſerved diſtinct at one time, are combined in various degrees at another. Thus, where the cauſe of fever acts by producing excitement, lively delirium in various degrees is the conſequence; while languor, ſtupor, and inſenſibility naturally follow the oppoſite mode of action. Low delirium, tremors, ſtartings, &c. are probably owing to a compound effect. Both modes of action ſucceed each other rapidly; or perhaps both modes are actually preſent at the ſame time, though probably in different degrees, in the different portions of the brain.--This fact at leaſt is certain, that obvious depreſſion is often combined with ſigns of great irritability. It is a remark likewiſe of conſiderable importance, that the natural functions are leſs diſordered, where the cauſe of the diſeaſe acts upon the nervous ſyſtem internally, or principally diſturbs the intellectual powers, than where

where this action is obviouſly external: the pulſe is then more regular, though often obſcure; the diſpoſition to faint is not ſo great; muſcular mobility is leſs remarkable, and local pains are felt leſs acutely. On the contrary, where this cauſe acts externally, or chiefly affects the moving powers, the diſpoſition to faint in changing poſture is more remarkable; tremors, ſtartings, &c. are more common; appearances, in ſhort, are more fluctuating and often more alarming.

It is a matter not leſs uſeful than curious to diſtinguiſh the different ſpecies of delirium in fevers, to trace the different combinations, and to mark the apparently trivial cauſes, which excite, or which ſometimes remove thoſe derangements of the reaſoning faculty. It is a remark, which has been often made, that while one delirious perſon in fever appears only to be in better ſpirits than uſual, another, or perhaps the ſame perſon in another paroxyſm of the ſame diſeaſe, is outrageous or perfectly furious. A third is low and languid, abſent and inattentive, or, with a fixed look of vacancy, does not ſeem to be otherwiſe deranged, than by requiring greater time to recollect himſelf. To which we may add, that there are ſome, who talk coolly on things

in general; but who cannot bear mention of ſome particular ſubjects.

SECTION III.

OF FEVER IN WHICH ARE DISCOVERED SIGNS OF MALIGNITY.

THE fever of Jamaica, as diſtinguiſhed by ſigns of inflammatory diatheſis, or by circumſtances of nervous affection, prevailed principally at Savanna la Mar; yet beſides the above forms of the diſeaſe, there ſometimes likewiſe occurred others, which ſhewed marks of peculiar malignity. It is difficult to define preciſely in words the character of the diſeaſe, which I now attempt to deſcribe; its diſcriminating marks, not conſiſting ſo much in one or two ſymptoms, as in a certain aſſemblage of circumſtances, reſiding chiefly in the ſtate of the eye and countenance of the patient, and conveyed with difficulty in verbal deſcription. I may remark, in the firſt place, that there was ſeldom any thing very particular in the manner of invaſion of this ſpecies of diſeaſe.

eaſe. The cold fit was rarely violent in degree, though it was often of long continuance: neither did the hot fit uſually run high, in the common acceptation of the word, though it was ſometimes attended with circumſtances peculiarly diſagreeable. The pulſe varied remarkably. It was obſcure, or ſcarcely to be felt in ſome; in others it was ſtrong, tho' unequally ſo; the artery, in many inſtances, being hard and contracted, with a peculiar vibration in the ſtroke. After theſe ſymptoms and others, which are uſual in this ſtage of fever, had continued for a longer or ſhorter time, ſweat began to make its appearance on the head and breaſt, which extending itſelf gradually to every part of the body, was at laſt followed by a remiſſion, tolerably perfect for the moſt part, though there ſtill remained ſome ſtrange and unpleaſant ſenſations. It does not appear that there is any thing very uncommon in the ſymptoms, which I have hitherto taken taken notice of:--thoſe which follow are more characteriſtic. The ſtate of the eye and countenance, afford the ſureſt ſigns of the malignity of the diſeaſe; but there is difficulty in diſcriminating thoſe appearances. The face is not unuſually fluſhed in fevers; but, in the preſent caſe, the countenance exhibits ſomething elſe beſides an ap-

pearance of ſimple fluſhing. It is likewiſe grim, dark and overcaſt, with ſuch marks of confuſion and diſtreſs, as if the patient were agitated by ſome reſentful paſſion. The eye is ſad and deſponding; and the whole appearance, in ſhort, indicates ſuch a ſtate of mind, as we ſhould be diſpoſed to ſtyle malignant. It is in ſuch a ſtate of the countenance as I have deſcribed, that the character of this ſpecies of fever chiefly reſides; yet beſides this, ſome other circumſtances frequently attend the diſeaſe, which are leſs uſual in ordinary fevers. The paroxyſm for inſtance returned, for the moſt part, much ſooner than the regular period, always with greater violence, and ſometimes with new and alarming ſymptoms. It declined in twelve or fourteen hours; but the remiſſion was leſs perfect than the preceding one; the next return of fever, which was likewiſe much earlier than the ſtated hour, was often uſhered in by convulſions, and the time of it occupied by ſtupor or coma. The tongue was likewiſe irregularly moiſt or dry. If dry, it was generally covered with a black ſcurf; if moiſt, with a thin glutinous coat, through which the red ſurface ſhining obſcurely, preſented an appearance of a leaden colour.--In this caſe the mouth abounded with a ropy ſaliva. But beſides the above

ſymptoms,

ſymptoms, there were alſo violent twitchings in the ſtomach and bowels, ſudden ſqueamiſhneſs, faintneſs, anxiety, reſtleſſneſs, frightful dreams, diſtreſſing apprehenſions, and frequently after the ſecond paroxyſm, a particular crouded eruption (not unlike iron-burnt bliſters,) on the upper lip, which for the moſt part ſpread towards the noſe. The type of this fever, it may be further remarked, was uſually of the ſingle tertian kind, generally anticipating by long anticipations. In moſt inſtances this malignant diſpoſition was diſcoverable at the very beginning; yet in others, no ſymptoms of a doubtful nature made their appearance till after the third revolution.

SECTION IV.

OF FEVERS IN WHICH ARE OBSERVED SYMPTOMS OF A PUTRESCENT TENDENCY.

WE meet with the term putrid fever, or fever with putreſcent tendency, in the writings of almoſt every authour who has treated of the diſeaſes of hot climates; but though

though this expreſſion is ſo much the common language of practitioners, I cannot help obſerving, that a remitting fever, with ſymptoms of a ſpecific putrefaction, did not once occur to my obſervation in the iſland of Jamaica, during the time that I lived in that country. I muſt however add, that though a remitting fever ſpecifically putrid is actually a rare diſeaſe; yet I do not attempt to deny, that a putreſcent tendency is frequently preſent in the primæ viæ, in a very conſiderable degree; and that marks of it are ſometimes diſcoverable, even in the general ſyſtem, at a late period of the illneſs, when the vigour of life has abated, and the powers of circulation have begun to fail. This however is ſo accidental and uneſſential, that it is only in compliance with the general language of medical people, that I think it neceſſary to deſcribe a diſeaſe, where theſe ſymptoms are obſerved to prevail. The tendency to putrefaction, which was obſerved in the fever of Jamaica, ſometimes begins in the primæ viæ; and from the primæ viæ was communicated to the reſt of the ſyſtem; ſometimes it remained confined to the limits of the inteſtinal canal, throughout the whole duration of the diſorder; in which caſe flatulence, ructus, anxiety, nauſea and thirſt were the

ſymptoms

ſymptoms which were chiefly troubleſome: the belly likewiſe was generally looſe, at the ſame time that the ſtools were dark and fetid. But where this tendency was communicated from the primæ viæ to the reſt of the body, or otherwiſe made its appearance in the general ſyſtem, a form of diſeaſe aroſe diſtinguiſhed by the following ſymptoms. If the tendency to putrefaction appeared at an early period, the heat of the ſkin made a more diſagreeable impreſſion on the hand, than was uſual in ſome other fevers; the ſkin itſelf was likewiſe for the moſt part, dry and conſtricted; the thirſt was irregular, ſometimes intenſe, ſometimes from local affection of the fauces, apparently little increaſed. The appearance of the eye was often ſad; ſometimes it gliſtened with unuſual brilliancy; ſometimes it ſeemed to be inflamed. The countenance was generally fluſhed, often particularly confuſed, and of a grim and clouded aſpect. I have however frequently obſerved, where ſymptoms of putreſcency diſcovered themſelves at a late period of a fever, the preceding courſe of which had been diſtinguiſhed by circumſtances of nervous affection, that the bloom of the complexion was uncommonly fine and delicate. To the above ſymptoms might be added, great irritability of temper, general uneaſineſs

of

of ſenſation, and diſorder in all the functions of the body. When the fever aſſumed this appearance, paroxyſms and remiſſions were generally obſcure and irregular. The fever indeed often ſubſided in a ſmall degree; but the future remiſſions generally became leſs diſtinct, as the diſeaſe proceeded in its courſe. The tongue aſſumed different appearances, at different periods and in different perſons. In ſome it was moiſt, in others parched and dry. It was not univerſally foul, at leaſt it frequently happened, that the edges were clear and beautifully red in their colour. The lips likewiſe were ſometimes ſmooth, and of a cherry-like appearance; at the ſame time that the gums were inflamed and ſpongy, as they uſually are in ſcurvy: the pulſe likewiſe was ſmall for the moſt part; but it was irregularly ſo. I ſay nothing of the diſpoſition to faint in erect poſture, which though generally enumerated among the ſigns of putrid fevers by authours, does not in fact appear to conſtitute a criterion of the diſeaſe.

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SECTION V.

OF FEVERS ACCOMPANIED WITH AN INCREASED SECRETION OF BILE.

THOSE ſpecies of fevers, which I have mentioned above, ſeem to affect the general ſyſtem, or every part of the body nearly alike; but beſides theſe, we ſometimes meet with others, which are diſtinguiſhed by local affections, or increaſed determinations to particular parts in a degree ſo remarkable, as to perſonate very exactly a peripneumony, a hepatitis, or inflammation of the bowels; the accompanying fever being at the ſame time ſo ſlight, as ſcarcely to be conſidered as a primary affection. As an accident ſimilar to theſe local affections of the liver or lungs, we may reckon an increaſed ſecretion of bile. The cauſe of fever, from circumſtances which we do not always perceive, ſometimes acts with particular violence on the biliary ſyſtem, in conſequence of which the ſecretion of bile being preternaturally increaſed, a diſeaſe ariſes, which without much impropriety may be called bilious. But though this irregular action

action of the morbid cauſe, on the biliary ſyſtem, frequently gives riſe to bilious appearances in the fevers of Jamaica; yet theſe appearances are in fact often owing to cauſes more accidental, and more remote than even this. Nauſea and vomiting are among the common ſymptoms of fevers in every country; but they are particularly frequent in thoſe of the Weſt-Indies. It is well known that a continuance of nauſea, or that a repetition of the action of vomiting, increaſes the determination, not only to the ſtomach, but likewiſe to the parts which are near to it. Hence the ſecretion of bile is preternaturally increaſed ſecondarily by the ordinary effect of vomiting, and bilious appearances become a neceſſary conſequence of this accidental ſymptom of the diſeaſe. In thoſe two manners, viz. in conſequence of the irregular action of the morbid cauſe on the immediately biliary ſyſtem, or from a ſecondary effect in conſequence of its action on the ſtomach, the bilious fever may, in ſome reſpects, be conſidered as a diſeaſe of nature; but beſides this, it often originates from our own treatment, viz. from the repeated uſe of emetics, or of cathartics, which are violent in their operation. The accidental appearance of bilious vomitings, in the fevers of hot climates, furniſhed

niſhed medical authours with a pretence of forming a new theory, and of directing the mode of practice to a particular view. Influenced by this appearance, they aſſume it as a fact, that a vitiated quality, or a redundant quantity of bile conſtitutes the eſſential cauſe of the diſeaſe; and on this foundation adopt the plan of repeated evacuating, both upwards and downwards; a practice which evidently increaſes the ſecretion of the bile. Hence, a diſeaſe, or the ſymptom of a diſeaſe, ariſes wholly from this mode of treatment; and the removal or cure of it is afterwards attempted by a perſeverance in the means, which originally gave riſe to it:--of this I have ſeen numerous examples.

I have now deſcribed the remitting fever of Jamaica, as characterized by ſymptoms of a different appearance. I may further remark, that where theſe ſymptoms were unmixed with each other, there was little difficulty in the diſtinction, and little embarraſſment in planning or executing the indications of cure: but it ſometimes alſo happened, that the different ſpecies, which I have deſcribed ſeparately, was ſo perplexed and complicated, that it appeared uncertain to which kind the diſeaſe properly belonged; or to which view the practice ought to be principally directed.

rected. Symptoms of putreſcency, for inſtance, were often combined with ſymptoms of apparent inflammatory diatheſis; as fevers with nervous affection, or putreſcent tendency, were ſometimes accompanied with marks of peculiar malignity. It happened often likewiſe, that the nature of the diſeaſe ſuffered a total change after a certain duration; or that a fever with one train of ſymptoms ceaſed, whilſt another with a different train began.

It would be a matter of no ſmall importance, were we able to aſcertain the various cauſes, which influence the various appearances of the ſame diſeaſe; but this knowledge is not eaſily attained:--much of it indeed lies beyond the reach of our comprehenſion. We may however remark, that the ſeaſon of the year uſually has ſome effect on the diatheſis of the ſyſtem, and often on the type and form of the fever. Thus, in the dry ſeaſon, though the remiſſions are not always more perfect, the type is commonly more ſimple, and the general diatheſis is oftener inflammatory. In the rainy months, on the contrary, remiſſions are more perceiveable, but the type is more complicated, and the general diatheſis of the ſyſtem has a ſtronger tendency to putreſcency, often with a mixture of ſymptoms of nervous affection, ſometimes with ſymptoms of a malignant

lignant nature. The ſtomach, bowels and biliary ſyſtem likewiſe ſuffer more in this ſeaſon than in the drier months of the year. But beſides this difference, which ariſes from ſeaſon, we alſo find very conſtant effects from local ſituation. Thus in hilly countries there is generally more of the inflammatory diatheſis, with more frequent determination to the head and lungs, and leſs obvious remiſſions, than in flat and champaign countries, where the ſtomach and biliary ſyſtem ſuffer in a more peculiar manner.

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CHAP. VII.

OF PROGNOSTIC IN THE FEVERS OF JAMAICA.

TO be able to perceive at a diſtance, the approach of danger or returning health, is a knowledge highly ſatisfactory and uſeful to the phyſician; but it is a knowledge which is not eaſily attained: for to judge with certainty of the event of fevers, requires not only long and attentive obſervation, but a diſcrimination of complicated and ambiguous appearances, which does not depend always upon attention alone. The ſagacious Hippocrates is generally conſidered as the firſt, who laid the foundation of the ſcience of prognoſtic; and we certainly muſt allow, that he has left us many important and valuable obſervations on the ſubject; yet we may alſo add, that his deciſions, in many inſtances, are precipitate. Hippocrates ſeems generally to have placed too great confidence in ſigns ſeparately conſidered, and to have formed his concluſions too often on the authority of ſingle facts. Thus he has ſometimes conſidered

ſidered as fatal in themſelves thoſe ſigns, which in reality are only dangerous. The abſolutely fatal ſigns in fevers are actually few in number. I am able to affirm from my own experience, that people are ſometimes reſtored to health after many of the uſually reputed fore-runners of death are preſent. We have, in fact, as yet only an imperfect knowledge of prognoſtic in fevers; but the field is ſtill open, and careful obſervation, it is to be hoped, may enable us in time to ſupply the defects. I dare not venture to aſſert, that I have advanced beyond others in this neceſſary and difficult ſcience; but I am diſpoſed to flatter myſelf, that the following attempt to appreciate the marks of danger or ſafety in the fevers of Jamaica, may be found in ſome degree uſeful. It contains the reſult of my own obſervations in that country; and though I am perfectly conſcious that the rules are often defective; yet I likewiſe know, that I have ſuggeſted ſome hints which have not been commonly obſerved, and which may help to direct thoſe, who have not had much experience of their own.

Prognoſtic is ſuch, as applies to fevers in general, or more particularly to the different ſpecies of the diſeaſe. The type or form, the general courſe and tenour of the diſorders, and

the *general* nature of the paroxyſms often afford uſeful information. From the type alone, we do not often obtain much that is to be depended upon. Long and diſtinct intermiſſions are commonly accounted ſigns of ſafety; yet we frequently ſee inſtances of the ſingle tertian proving fatal, while types of greater complication are often void of danger: In general, however, complicated types are ſuſpicious,--and perhaps more commonly fatal than others. But though a knowledge of the type of the fever abſtractedly conſidered, does not commonly afford any material indication of danger or ſafety; yet the time of the return of the paroxyſm is a ſubject, from which more may be learned. An anticipation of an hour or two, is ſeldom much to be regarded; yet an anticipation of ten or twelve is always ſuſpicious. It either indicates a latent malignity, or a tendency in the diſeaſe to change to a continued form. The complication of another fever, or the doubling of type is by no means favourable; yet it is much leſs to be dreaded, than a long and an irregular anticipation. Anticipations have been generally conſidered as ſigns of the increaſing force of the fever; ſo the type which poſtpones, is uſually believed to indicate a diſeaſe, which is haſtening to a favourable termination: the effect however is

ſome-

ſometimes the contrary. I have myſelf ſeen ſome inſtances, where, in conſequence perhaps of weakneſs and impaired ſenſibility, the return of the fatal paroxyſm, though it probably had commenced ſooner, was not clearly perceived till after the uſual hour of attack. But beſides thoſe indications of danger or ſafety, which may be drawn from the nature of the ſimple type, or from the hour of return of the paroxyſm, the ſtate of the paroxyſms and remiſſions deſerves likewiſe to be attended to. It was generally obſerved, where the paroxyſms were regular, and aſſumed a completer form in the progreſs of the diſeaſe, that there was not generally much reaſon to dread an unfavourable event. Hopes of ſafety might likewiſe be entertained with ſtill greater confidence, where the paroxyſms, though more violent in degree, became more regular and diſtinct after the uſe of bark, wine and ſtimulants. On the contrary, it was always an indication of danger, where they became longer or loſt the diſtinctneſs and regularity of their form, as the diſeaſe advanced in its progreſs. Changes from bad to good, in the courſe of the fever, alſo indicated more ſafety as the oppoſite changes indicated more danger, than if circumſtances equally unfavourable had continued from the beginning.

In enumerating thoſe particular ſigns or ſymptoms, from which we are led to form a judgement of the event of the remitting fever of Jamaica, I ſhall conſider in the firſt place the ſtate of the pulſe. The pulſe is ſo differently affected by the ſame cauſes in different people, and individually ſubject to ſo many peculiarities, that concluſions formed ſolely upon this baſis muſt ever be fallacious. Hippocrates, who has treated very fully of the other ſigns of prognoſtic, is totally ſilent on the ſubject of the pulſe. He has mentioned the term, indeed, in ſeveral parts of his works; but it does not appear, that he had a perfect knowledge of the nature aud indications of the pulſations of the arteries. The ſubject was ſomewhat better underſtood before the time of Celſus: yet this authour does not believe, that any information could be drawn from the ſtate of the pulſe alone, which was in any great degree to be depended upon. Galen, who is generally diffuſe on every ſubject, has treated very fully of the nature of the pulſe. He has indeed multiplied diſtinctions to an amazing extent, and ſuggeſted combinations of endleſs variety; yet notwithſtanding this apparent minuteneſs, there are ſtill ſeveral important obſervations with reſpect to it, which have eſcaped him altogether. It is not

many

many years ago, that Dr. Solano, a Spaniſh phyſician who practized at Antequiera, opened ſome new and curious views concerning the pulſe, and its various indications.

The detail of facts with which this writer has furniſhed us, is really wonderful, and the candour with which he has related them, independent of the teſtimony of ſeveral reſpectable authorities, engages us to give him credit. I had not heard of Solano's diſcoveries at the time I lived in Jamaica, and I do not find that I had ever taken notice of obſervations ſimilar to thoſe he has mentioned. I was able indeed, for the moſt part, to foretell from the nature of the pulſe, even in the beginning of the diſeaſe, whether the fever would be of a continued or remitting form; but I did not diſcover any ſigns from it, which led me to form a judgement of the future mode of termination. I may add, that I met not with any inſtances of criſis by hæmorrhage; neither did I ever take notice of the rebounding pulſe. The intermitting pulſe occurred frequently, ſometimes as a forerunner of death, ſometimes as an attendant of favourable criſis: but I cannot ſay, that I obſerved that it ever preſaged a future diarrhea. I ſhall however paſs over the obſervations of others without further comment for the preſent,

ſent, and content myſelf with relating thoſe circumſtances of pulſe connected with danger or ſafety, as they occurred to my own obſervation in the remitting fever of the Weſt-Indies. I muſt remark in the firſt place, that independent of peculiarities of conſtitution, a weak, a feeble and eaſily compreſſed pulſe was generally a bad one: a pulſe which was indiſtinct and ſmall, or ſmall and hard, particularly at a late period of the diſeaſe, or together with delirium or clammy ſweats, indicated, for the moſt part, the moſt extreme degree of danger. That ſpecies of pulſe moreover, where the ſtroke was obſcure, or felt with difficulty, was ſuſpicious at all times; but it was particularly dangerous where accompanied with a wavering, a tremulous, a conſtantly creeping or vermicular motion in the artery. I am not certain that my meaning will be clearly underſtood; yet I believe that thoſe who have once obſerved this tremulous and creeping pulſe, will not eaſily forget the danger which it indicates. It often attended a fever of a malignant kind, where the nervous influence appeared, in ſome degree, to be ſuſpended.--But to proceed: it is an obſervation ſo well known as to render any mention of it almoſt ſuperfluous, that a frequent, an irregular, a fluttering and intermitting

mitting pulſe commonly indicates danger, ſometimes approaching death: yet I muſt add, that an intermitting pulſe ſometimes attended the favourable criſis of a peculiar ſpecies of fever. It was obſerved, however, in ſuch caſes, that the pulſe was not otherwiſe irregular, than by failing in its ſtroke at the end of every third or fourth pulſation, neither was it generally found to be uncommonly frequent. Some inſtances of this ſingular appearance occurred to me during the time that I remained in Jamaica; ſo that I was in ſome degree diſpoſed to rank the intermitting pulſe among the ſigns of favourable criſis, in a ſpecies of fever, the preceding courſe of which had been diſtinguiſhed by ſymptoms of a peculiar nervous affection. When I became acquainted afterwards with the obſervations of Dr. Solano, I began to doubt whether the intermiſſion of pulſe, which I had met with in the fevers of Jamaica, might not have been a ſign of approaching diarrhea, which had not occurred to my notice, rather than a ſign of proper criſis, as I had formerly imagined. I remained in this uncertainty till lately, that ſome inſtances of this ſymptom happening at the termination of fevers in this country, have helped to confirm me in the opinion which I entertained before. I found in thoſe caſes to which

which I allude, that the pulſe intermitted after every third or fourth ſtroke on the day, on which I expected the criſis. The intermiſſion of the pulſe was not of ſuch a nature as indicated approaching death; I therefore looked watchfully for a diarrhea, but no diarrhea enſued. It muſt be confeſſed, indeed, that one of the patients ſeemed to be much diſtreſſed with gripes and flatus; but being deprived of the power of ſpeech, we could not obtain any accurate idea of his feelings:--and no evacuation actually took place, till the day following, before which time the intermiſſion had diſappeared altogether.--Beſides the above, there are ſome other ſigns of pulſe, which have their particular indications; but they are ſo generally known, that it will not be neceſſary to enlarge on the ſubject. I ſhall therefore only obſerve further, that changes from better to worſe in the ſtate of the pulſe, as the diſeaſe advances in its progreſs, are bad, while the oppoſite changes are favourable: yet I muſt likewiſe add, that in thoſe caſes of favourable change, it will be neceſſary to diſtinguiſh carefully the pulſe of coma, from the pulſe of returning health.--The difference is ſometimes ſcarcely to be known, except from the attending ſymptoms.

Next

lext to the ſtate of the pulſe, I ſhall men-
thoſe appearances of the tongue, which,
ther with other concomitant circum-
ces, frequently afford ſigns of the mild-
or malignity of the diſeaſe. Though
lo not expect that the tongue ſhould be
healthy aſpect, during the continuance of
ver; yet where it is dry only in a mode-
degree, or where it is covered with a
oth and whitiſh coat, the diſeaſe for the
t part, is void of malignity, though not
ays of danger. On the contrary, where
immoderately dry, or dry and black, the
ications of danger are great, and I may
, ſtill greater where a white ſlimy and glu-
ous ſubſtance covers its ſurface. This
y ſtate of the tongue was often ſeen at an
y period, and as far as my experience
s, conſtantly indicated malignity. To the
ve we may add, a ſodden or parboiled ap-
rance of the tongue, which was not of leſs
gerous import than the preceding. But
ides thoſe obviouſly unhealthy aſpects of
tongue, its appearance in ſome inſtances
s not different from its natural ſtate, ex-
ot in a certain lividneſs of colour. This
s conſtantly ſuſpicious, and if not fatal,
s always extremely dangerous. The danger
licated by the tongue, when it is intenſely
dry,

dry, rough, cracked, or ulcerated is generally known; but I muſt not omit to mention, that when from a dry and unhealthy ſtate, it turns moiſt ſuddenly, or aſſumes its natural appearance, whilſt the other ſigns of favourable criſis did not ſhew themſelves at the ſame time, a change of the mode of action of the febrile cauſe is indicated,--and generally a dangerous one.--I ſay nothing of paleneſs and tremor, as theſe ſymptoms only indicate certain ſtates of general or particular debility of the nervous ſyſtem.

Vomiting is another of the alarming, and ſometimes of the dangerous ſymptoms of the fevers of the Weſt-Indies. If this ſymptom continues during the remiſſion of the fever, without material abatement, there is reaſon to dread its conſequences; but if it vaniſhes or abates in a very material degree at the decline of the paroxyſm, it does not deſerve to be ſo particularly regarded. The practice however to which it leads is often ſerious. Vomiting is ſuppoſed by moſt practitioners to indicate emetics; but the indication is fallacious, and the practice is often pernicious. During the time that I lived in Jamaica, I had frequent opportunities of ſeeing vomitings rendered continual by the repeated uſe of emetics, which before this treatment, appeared

peared to be only accidental ſymptoms during the paroxyſm of the diſeaſe. I therefore at laſt became cautious of purſuing this view, and have reaſon to believe, that if I did not oftener do good than others, I ſeldomer increaſed the danger. But beſides the degree and frequency of the vomiting, the nature of the matters thrown up may likewiſe furniſh indications of the danger or ſafety of the fever. The various kinds of bilious vomitings have been fully explained, and the danger of each has been ſo particularly pointed out by many writers, (1) eſpecially by Hippocrates, that I paſs over the ſubject without further notice, conſidering it unneceſſary to repeat the obſervations of others. I muſt however remark a more uncommon kind of vomiting, which ſometimes happened in the fevers of Jamaica, and which I believe has hitherto eſcaped the notice of obſervers. The vomiting to which I allude in this place, is a vomiting of a clear and ropy liquor, in which are often found ſwimming flakes of a darker coloured mucus. This appearance was chiefly obſerved, where the remiſſions were indiſtinct, and the ſweats partial and incomplete. It conſtantly afforded an indication of danger, and I ſeldom found that the uſual remedies were effectual in reſtraining it. Vomitings of black and vitiated

tiated matters are commonly known to be of the moſt dangerous import,--ſucceeded by obſcure hickupings, they are often fore-runners of death. Yet though this is generally true, I muſt not at the ſame time omit to mention, that I have ſeen ſeveral inſtances of recovery where black vomiting had prevailed for ſome time; and other caſes which give me room to conclude, that hickupings are not conſtantly fatal. I take the preſent opportunity to remark, that hickup was ſometimes only a diſtinguiſhing ſymptom of the diſeaſe, which increaſed or declined with the paroxyſm; and that in other inſtances it attended the favourable criſis of fevers, the preceding courſe of which had been characterized by ſymptoms of nervous affection. This ſpecies of hickup was generally alarming in degree, and equally inexplicable with the intermitting pulſe, which I mentioned above as ſometimes attending a favourable termination. It often continued the ſpace of twenty-four hours, in ſpite of all that could be done by medicine.

Next to the indications of vomiting, I ſhall enumerate ſuch as may be drawn from the preſence or abſence of thirſt. Immoderate and unquenchable thirſt has always been reckoned an unfavourable ſymptom in fevers. It is ſo undoubtedly, yet I have frequently ſeen very extra-

extraordinary degrees of it continuing for a length of time, without particular danger. Beſides the deſire for liquid in general, there is often an unconquerable longing for drinks of a particular kind;--a feeling which ought always to be attended to, and frequently complied with.--The deſire for cold water is ſometimes ravenous.--I have known it not only ſatiated with ſafety, but even with good effects. But though this immoderate thirſt is juſtly reckoned a bad ſymptom in fevers; yet an indifference for liquid, with a dry tongue, and other marks of internal heat, is ſtill worſe. (2) It has indeed been generally conſidered as fatal; but here we ought to diſtinguiſh, whether it proceeds from local affection of the tongue and fauces, or from a general failure of the powers of life. In the one caſe it is a mortal ſign, in the other it can only be ſaid to be dangerous.

(3) The ancients, particularly Hippocrates and his commentator Galen, have treated ſo fully of the indications of evacuations downwards, that I ſhould be able to do little more than to copy their obſervations. There is one ſpecies of evacuation, however, which they do not appear to have deſcribed very explicitly, and which I have often obſerved to be attended with great danger. This is the fre-

frequent, ſmall and ineffective excretion, and more particularly copious ſtools, which reſemble dirty water, eſpecially if accompanied with tenſion of the hypochondria and abdomen.

Medical writers have been long accuſtomed to form a prognoſtic of the event of fevers, from puſtular or ſcabby eruptions about the mouth: but the ſign is ambiguous, and cannot be depended upon, without many limitations. I ſhall however relate that which has occurred to my own obſervation, without troubling myſelf about the opinions of others. And I remark in the firſt place, that an eruption about the corners of the mouth, and near the lips, which comes forth freely, and ſoon turns into a ſcab, particularly if it does not appear till after the third revolution of the diſeaſe, affords a general ſign of ſafety, at leaſt it affords a ſign that the complaint has attained the height of its violence. On the contrary, an eruption which ſhews itſelf at an earlier period, which is crouded, and makes its way with difficulty, or which reſembles iron-burnt bliſters rather than puſtules properly ſo called, particularly if it is on the upper lip, and ſpreads towards the noſe, affords a general indication of danger and malignancy.

lignancy.--Small and imperfect eruptions likewiſe are frequently a ſign of a tedious diſeaſe.

The ſtate of animal heat is another of thoſe circumſtances, which may be conſidered as affording an indication of the nature and event of fevers. Where the heat of the body, in the remitting fever of Jamaica, was equally diffuſed to the extremities, or not differing from an increaſed degree of natural warmth, the diſeaſe was uſually mild, without particular danger or malignity; but where acrid, fiery and pungent, though perhaps not much increaſed in degree, danger was apprehended with reaſon, particularly if the warmth was not extended equally to every part of the body. In the remiſſions of thoſe fevers, which were diſtinguiſhed by ſymptoms of nervous affection, or, as is more commonly believed, putreſcent tendency, the heat of the body was often ſeveral degrees below the ſtandard of health. The ſymptom was alarming, but it was not in fact, of much conſequence. This diminution of the heat of the body, during the remiſſion, was not by any means a rare occurrence; but beſides this, there was ſometimes obſerved a degree of coldneſs, during the favourable criſis of nervous fevers, of a very ſingular and extraordinary kind. In ſome inſtances this coldneſs was not inferior in de-

gree to that of a perſon dying, or actually dead; yet a diſtinction was perceived without difficulty. It was not accompanied with marks of ſtricture on the ſurface of the body, at the ſame time that the pulſe was generally ſoft, regular and full.

Next to the ſtate of animal heat it will not be improper to conſider the indications of the various kinds of ſweats. (4) The ſigns of a favourable ſweat are commonly known. Where that excretion was fluid, warm and univerſal, particularly where accompanied with a ſoft, full and expanding pulſe, calm and eaſy reſpiration, general relief from ſymptoms of diſtreſs, with a chearful eye and countenance, we might in general preſume on ſafety of the diſeaſe, often on its favourable termination. On the contrary, where the ſweat was cold, clammy and partial, particularly where the pulſe became or continued frequent, ſmall and tenſe, with anxiety, reſtleſſneſs and diſturbed reſpiration, a circumſcribed fluſhing, a greaſy hue of the countenance, or a wild and dejected appearance of the eye, the ſituation was then alarming:—death, in ſhort, was ſeldom far off. There is, however, an obſervation with regard to this ſubject, which I muſt not omit to mention. Authours, with one conſent, have conſidered

ſidered cold ſweats as certain mortal ſigns in fevers; but there appear to be exceptions to this general rule. I met with ſeveral inſtances, while I remained in Jamaica, where univerſal fluid ſweats, of an extraordinary degree of coldneſs, accompanied the criſis of the diſeaſe. I was much alarmed when this appearance firſt occurred to me; but my fears ſoon vaniſhed, as I found that the pulſe became ſlower and fuller, that the reſpiration became calm and eaſy, and particularly that the eye and countenance acquired ſuch a chearfulneſs and ſerenity, as are uſual at the favourable termination of fevers.

To the ſigns of prognoſtic, which I have mentioned above, I ſhall add thoſe which are indicated by the general ſtate of the vital powers, or by the more particular affection of parts, which are of immediate importance to life. (5) Among the firſt of the affections of the vital organs, we ſhall conſider ſuch indications as ariſe from a diſturbed ſtate of reſpiration. A frequent, a hurried and unequal reſpiration, (I do not ſpeak of that which depends on primary affection of the lungs), is juſtly conſidered as a ſign of a bad diſeaſe. This is more certainly the caſe, where accompanied with deep and heavy ſighing. Frequent ſighing was a common ſymptom in the

fevers of Jamaica, where the powers of life were depreſſed; and though not abſolutely a mortal ſign, it conſtantly indicated danger.

(6) Next to the ſtate of reſpiration, I ſhall mention the ſtate of the intellect, or reaſoning faculty, which often afforded ſome prognoſtic of the event of the fever. Delirium, I obſerved before, was a common ſymptom in the remitting fever of Jamaica. Where it vaniſhed or abated as the paroxyſm declined, it was ſeldom found to be of material conſequence. On the contrary, where it continued during the remiſſion undiminiſhed in degree, it was a ſymptom of the moſt ſerious nature. I mentioned in a former part of this treatiſe, that the cauſe of fever appeared to act on the brain and nervous ſyſtem, in two general and oppoſite ways; that is, by occaſioning excitement or depreſſion. Of theſe two modes of action, depreſſion was the moſt dangerous; unleſs where the excitement ran uncommonly high. But though I obſerved, that there are only two general modes of operation, viz. excitement and depreſſion; yet I muſt alſo add, that the modifications are numerous, and very variouſly combined. Among the moſt dangerous and alarming ſpecies of the derangements of the intellect, we might reckon a ſtern ſullenneſs, an unmanageable furiouſneſs, picking

picking the bed cloaths, tracing figures on the wall, and ſuch other inſtances of perverted judgement. Stupor and ſuſpenſion of the nervous influence, as we might term it, were likewiſe greatly to be dreaded: unleſs they ſhewed themſelves only during the time of the paroxyſm, they were generally fatal, more certainly ſo, if they followed convulſions.

(7) As nearly connected with delirium, we ſhall now conſider other diſturbed ſtates of the functions of the brain, viz. the ſtates of reſt and watching. We do not expect that ſleep ſhould be ſound and undiſturbed in fevers; yet we have been accuſtomed to think favourably of the diſeaſe, where the patient is refreſhed by it. On the contrary, total want of reſt, or unrefreſhing ſlumbers, conſtantly indicate danger. There is, however, an aſtoniſhing diverſity of conſtitution in this reſpect, that muſt always be taken into the account in forming an opinion. Want of ſleep was obſerved to give riſe to delirium in ſome perſons very ſpeedily; others ſupported it for a great length of time, without any appearance of delirium or ſpaſmodic affection. An appearance of ſleeping, without actually enjoying the comforts of ſleep, is well known to be a dangerous ſymptom; yet it is not by any means a mortal one. Anxiety and reſtleſſ-

neſs, are often referred to the ſtomach; but reſtleſſneſs and jactitation, as depending on the ſtate of the nervous ſyſtem, were likewiſe frequent, and generally dangerous ſymptoms. Tremors of the tongue and of the hands were common appearances in fevers, with marks of nervous affection; but I have likewiſe met with inſtances, where the whole body ſhook, when any motion was attempted, not otherwiſe than it does in paralyſis or chorea ſancti viti. Startings and ſubſultus tendinum were not uncommon; and they were juſtly conſidered as indications of danger; ſometimes as forerunners of convulſion. A diſpoſition to faint, even actual fainting, was frequent in the fevers of this country. It was always dangerous, though perhaps leſs ſo, than other ſymptoms which were leſs alarming, particularly if it ſuffered increaſe and diminution with the paroxyſms and remiſſions of the diſeaſe. But beſides theſe ſymptoms, which indicate diminiſhed energies, or irregular action of the nervous influence, we may likewiſe obſerve, that the ſphincter muſcles frequently loſe their power of contracting, particularly in the advanced periods of fevers. Thus perſons ſometimes can only lie upon their back, the eyes and mouth are half open, the powers of ſpeech and ſwallowing are impaired

paired or loſt, and urine and ſtools paſs off without conſciouſneſs or againſt the will. It is unneceſſary to remark, that theſe are all ſymptoms of the moſt extreme danger. If they proceed from a general and uniform diminution of the powers of life, we may juſtly conſider them as fatal; if they are only produced by a certain mode of action of the febrile cauſe, and are remarkably increaſed during the paroxyſm, or aggravated by peculiar circumſtances of conſtitution, we ſhall find many inſtances of recovery. Thus, I have often ſeen people recover, who could neither ſpeak nor ſwallow; who did not appear even to diſtinguiſh objects, and who were unable to retain their urine and ſtools; or who were not conſcious when they paſſed; yet I do not pretend to have met with any of theſe fortunate events, where theſe alarming ſymptoms were the conſequence of uniform diminution, or general extinction of the vital principle.

(8) From the ſigns which I have enumerated, ſeparately and collectively conſidered, we may in general be able to form ſome prognoſtic of the nature and event of the fevers of Jamaica. If to theſe we add thoſe indications, which may be taken from the ſtate of the eye and countenance, we may attain a ſtill more ſatisfactory knowledge. It is an obſervation

which I have conſtantly found to be true, that where the eye and countenance were ſerene and chearful, the diſeaſe was void of any latent malignity, though it might be otherwiſe of a dangerous nature. On the contrary, where the appearance of the eye was ſad, watery, inflamed or uncommonly gliſtening; where the countenance was of a dreary hue, downcaſt, dark and clouded; and ſometimes where it was of a beautiful blooming colour, which was not natural to the patient, there was always reaſon to ſuſpect danger. But though a ſerene and chearful eye and countenance are generally indications of ſafety, I muſt not at the ſame time omit to mention, that it ſometimes happens in beginning mortifications, or in imperfect or unfavourable criſes, that the eye and countenance aſſume, for a ſhort time, this flattering appearance of ſerenity and compoſure, though the hour of death is actually approaching faſt. The indications from the eye and countenance are of the greateſt importance, in enabling us to form a judgement of the event of fevers; but little of this knowledge is, in fact, communicable in words. It muſt be drawn, in a great meaſure, from our own obſervations.

I do not pretend that the ſigns of prognoſtic, which I have enumerated in the preceding

ceding pages, are by any means complete, if referred to fevers in general; but I at the ſame time believe, that they are leſs defective, if applied more directly to the remitting fever of Jamaica. They were collected at a time when I was not much acquainted with books: and, on that account, I am induced to offer them to the public with more confidence; particularly, as I find that the indications, to which I have principally truſted, appeared in the ſame light to ſome authours, who are univerſally conſidered as careful obſervers, and who practiſed in climates, in many reſpects, ſimilar to that of the Weſt-Indies. I have diſcriminated, as far as was in my power, between the doubtful and more certain appearances of danger or ſafety; and I hope I have no where advanced any thing, which has a tendency to miſlead the uninformed. I may add, that general knowledge in prognoſtic goes no farther than a very rude outline, which individuals muſt fill up from their own experience. There are, in fact, few ſigns in fevers, which are abſolutely deciſive in themſelves; and as theſe ſigns are often variouſly combined, ſo they muſt be ſeparately and collectively eſtimated. It is only from conſidering accurately the reſult of the whole, that we can be enabled to ſpeak with confidence.

CHAP.

CHAP. VIII.

OF THE DIFFERENCE BETWEEN A CRISIS AND SIMPLE REMISSION.

IT is certainly a matter of ſome importance, to be able to diſtinguiſh between actual criſis and the ſimple remiſſion of the fever of Jamaica; but it is a matter about which the practitioners of that country did not ſeem much to concern themſelves. A difference undoubtedly exiſts, and the marks of it appeared to me clear and unequivocal in moſt inſtances. It was otherwiſe in the intermitting fever of America. In the pure intermitting fever of that country, I ſometimes gueſſed luckily; but I cannot ſay poſitively, that I ever diſcovered ſigns on which I could depend with abſolute certainty, that the fever was gone, not to return again, till the hour of return was paſt. In this diſeaſe, on the contrary, I ſhould not expect to be deceived once in a hundred times. Much of this information, however, is too minute to be intelligibly explained in words, and therefore can only be acquired by actual obſervation.

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I ſhall attempt to enumerate the principal f thoſe ſigns, from which we may be enabled attain ſome knowledge of the difference etween actual criſis and temporary remiſ-on: and in the firſt place I remark, that ie tongue was uſually rough and dry, even uring the moſt perfect remiſſions of the en-emic fever of Jamaica. If it therefore hap-ened, that it aſſumed a ſmooth and moiſt ppearance at the end of a paroxyſm, there enerally was reaſon to believe that the fever as gone, not to return again. This pre-mption was ſtill ſtronger, where its edges cquired the cherry-like colour of health; and articularly where the coat, with which it was ſually covered, ſhewed a diſpoſition to looſen nd ſeparate. It muſt however be remarked, hat though theſe appearances of the tongue forded a common mark of the termination f fevers, they did not by any means afford a lecifive one. Inſtead of criſis, they ſometimes nly indicated a change in the mode of action f the febrile cauſe: they were, in ſhort, in ome caſes only forerunners of ſymptoms of ervous affection, or marks of a change from a ontinued to a remitting or intermitting form. uch are the preſumptions of actual criſis, hich might be drawn from the appearances f the tongue, where the tongue happened to be

be remarkably changed from its natural appearance in the preceding courſe of the diſeaſe. But it alſo ſometimes happened in caſes of the ſingle tertian, where the paroxyſms were ſlight, and the remiſſions long and perfect, that the tongue was ſo little altered by the preſence of the fever, as not to afford any certain criterion between the remiſſion and actual criſis. In ſome fevers likewiſe of a malignant kind, the tongue was ſometimes ſmooth and moiſt, even red and clear on the edges, whilſt the diſeaſe was advancing rapidly. This, however, ſo far as I have ſeen was conſtantly connected with a particular ſtate of the ſtomach, viz. with nauſea, or with vomiting of a viſcous liquor.

Signs of criſis taken from the pulſe alone, were not in general much to be depended upon in the fevers of Jamaica; yet, together with other circumſtances, the ſtate of the pulſe might often help us to decide in doubtful ſituations. Changes from bad to better, if no ſymptoms of comatoſe affection appeared at the ſame time, were generally conſidered as indicating criſis, or tendency to criſis; yet it will be leſs expected, perhaps, that I ſhould rank the intermitting pulſe among the ſigns, which indicate a favourable termination of the diſeaſe. Some inſtances of this have occurred to me, both in the Weſt-Indies and in England;

and; but though I mention the fact, I confeſs myſelf unable to offer an explanation of it.

The ſtate of the ſkin affords marks more deciſive of the total or temporary abſence of fever, than the ordinary ſtate of the pulſe. When the ſweat, which in the preceding remiſſions had been partial and imperfect, became copious, fluid, univerſal and of long continuance, there was generally a preſumption of criſis. But independent of the nature of the ſweat, there is ſomething in the ſtate of the ſkin, ſomething in the impreſſion which it makes on the hand which feels it, very different when the fever has only remitted, and when it has terminated finally. Though it may be difficult, perhaps impoſſible, to mark this diſtinction preciſely in words; yet it is eaſily known to thoſe, who accuſtom themſelves to obſerve minute circumſtances with attention. There was, in fact, no indication of that ſpaſmodic ſtricture on the ſurface, which had been obſervable in the former remiſſions, and we might ſay, that the body was perſpirable, even in the extreme parts. It is a circumſtance likewiſe not a little curious, that the heat of the body, during a criſis, particularly in thoſe fevers, which had principally affected the nervous ſyſtem, was ſometimes ſo much below what

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it uſually is in health, as to be really alarming. In ſome inſtances, I have found the extremities to be not leſs cold, than if the patient had been actually dead; yet this coldneſs was of ſuch a nature, as to be diſtinguiſhed without much difficulty from that which precedes death.

The above is only a very imperfect hiſtory of thoſe ſigns, which actually diſtinguiſh the criſis of fever from a ſimple remiſſion. There are ſtill ſome others, not leſs to be depended upon, perhaps, but which cannot be ſo eaſily reduced to diſtinct deſcription. Among theſe, we may reckon unuſual evacuations upwards or downwards, ſound and refreſhing ſleep, where watchfulneſs had prevailed through the preceding courſe of the diſeaſe, return of natural appetites, decreaſe of thirſt, looſening of ſcabby eruptions, and above all, a certain expreſſion of chearfulneſs in the eye and countenance, which though not to be defined in words, conveys to the mind of the obſerver, a ſtrong conviction of what is going forward. (1) This brightneſs of the eye was well known to Hippocrates, as a ſalutary ſign in fevers; but though it generally affords a very decided indication of a favourable event; yet we muſt be careful to diſtinguiſh from it that clear and glaſſy appearance, which the eye ſometimes acquires previous to death.

CHAP.

CHAP. IX.

THE GENERAL CURE OF FEVER.

BEFORE I attempt to offer rules for the treatment of the remitting fever of Jamaica, it will be proper to conſider in the firſt place, how far the cure of the diſeaſe is the work of nature, and how far it already has been, or hereafter may be accompliſhed by the exertions of art. The queſtion is important, and till its limits are defined, we cannot hope to eſtabliſh rules of practice on a firm baſis, or to conduct a mode of treatment on a conſiſtent plan. It will be neceſſary however, before entering farther into this ſubject, to conſider the power of the vis medicatrix naturæ:--a principle, which under one name or other, has influenced the views of medical men from the earlieſt records of phyſic, till the preſent times.

SECTION I.

OF THE VIS MEDICATRIX NATURÆ.

IT is an opinion, which ſeems either to have been expreſsly avowed, or tacitly acknowledged

ledged in every age of the world; that a fever is a combat or effort of nature, to remove from the ſyſtem the derangements of a morbid cauſe; or in other words, to reſtore a diſeaſed body to its ordinary health. It was long believed, that the powers of the conſtitution made an attempt to concoct the crude and undigeſted humours;--and finally to expel them from the body. But this mode of reaſoning is found to be unſatisfactory; and ſome late authours have adopted the idea, that nature directs her efforts towards effecting a ſolution of ſpaſm, on the preſence and obſtinacy of which the diſeaſe has been thought, in ſome meaſure, to depend. It will be a hard taſk to reconcile this difference of opinion, or to ſay which is the right one. There are plauſible arguments on both ſides of the queſtion; and neither ſuppoſition, perhaps, is accurately true. The coction of humours (as it may be called) is often apparently connected with evident approaches towards a relaxation of ſpaſmodic ſtricture; and increaſed diſcharges by the different excretories, are obviouſly attendants of its actual ſolution. Yet though this is certainly true, it ſtill is not clear, that either the coction of the humours, or the ſolution of the ſpaſm, is the real effect of a regular mechanic operation of the powers

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of nature, attempting by this means to overcome the deſtructive tendency of the diſeaſe. It is even more probable, that the coction of the humours, or ſolution of the ſpaſm are only circumſtances of accident, occaſionally connected with certain ſtates of action of the morbid cauſe; but which do not ariſe from the regular deſign of nature to accompliſh this purpoſe. I juſt now obſerved, that there is a difference of opinion about the mode of operation, which nature employs to combat the effects of the diſeaſe; but I may add, that no body, as far as I know, attempts to deny the exiſtence of ſuch a principle in the conſtitution of the frame, as diſpoſes it to reſtore its own health by a certain train of regular efforts. On the firſt view of the ſubject, indeed, there are many circumſtances which give countenance to the opinion. The relief which often follows hemorrhage, ſweat and other evacuations in unuſual quantity; and ſtill more, the relief, which attends the eruption of the ſmall pox, or the appearance of gout on the extremities, undoubtedly affords a ſtrong preſumptive argument, that nature raiſes ſome active and generally well directed efforts, which remove from the body a cauſe that diſturbs the ordinary functions of health. But though the above circumſtances are com-

monly known, and may be ſuppoſed to afford an argument in ſupport of this opinion; yet the fact may perhaps admit of another explanation, while there are other appearances, connected with the ſubject, which render the exiſtence of this regular deſign of nature very queſtionable. When I ſay, that I cannot readily allow the vis medicatrix naturæ, (in the ſenſe in which it is generally underſtood), to be an eſtabliſhed principle in the conſtitution of the frame, I am aware, that I incur an imputation of preſumption. An opinion, venerable from antiquity, and ſupported by many plauſible arguments, might be thought to be ſecure from the attacks of a man, who has no profeſſional reputation to boaſt of: yet as no deſire of novelty has induced me to fabricate a conjecture on a dark ſubject, ſo I humbly hope I may be indulged in my attempt to explain an important truth. The ſanction of two thouſand years, and the authority of the names who ſupport this doctrine, are formidable opponents; yet I truſt I may be able to prove, that the vis medicatrix naturæ does not, as is commonly believed, reſtore the health of the body by one general and uniform mode of operation; or that our diſeaſes are not removed in conſequence of a regular deſign in the mechaniſm of the frame. I ſhall

relate the facts from which I have been led to form this concluſion; for the refutation or confirmation of which, I require no other indulgence than a candid enquiry.

I have juſt now declared, that fever, or the cauſe of fever, is not combated and finally overcome by a regular train of active efforts, or a vis medicatrix naturæ: and I muſt obſerve in proof of it, that there were many of the fevers of the Weſt-Indies, where the diſeaſe, or the paroxyſm of the diſeaſe, vaniſhed or declined, without any exertion on the part of nature being perceiveable. The powers of life, during this period, were in ſome degree ſuſpended. The patient, who could only be ſaid not to be actually dead, was totally inſenſible to every object that was near to him; and often did not feel the irritation of acrid ſubſtances that were applied to him: yet after a certain continuance in this ſtate, he began to reſume his powers of ſenſation and motion; and the diſeaſe at laſt ſubſided or vaniſhed, though the efforts of nature were not diſcovered; nay, though the vital powers were ſometimes in a ſtate ſo weakened, as to be apparently very little capable of effort. This fact, which the moſt ſuperficial obſerver could not eaſily overlook, furniſhes ſufficient reaſon for doubting of the very exiſtence of a

vis medicatrix naturæ; a doubt which is further corroborated, by obſerving the manner in which death frequently approaches in the fevers of Jamaica. It is known, that the ſufferings of the patient are ſometimes alleviated for a ſhort time before death. This alleviation, wherever it does take place, happens conſtantly at the expected period of criſis. The cauſe of it has generally been attributed to the vis medicatrix naturæ; that is, to a laſt effort of the powers of life; but I have weighed carefully all the circumſtances connected with the phenomonon, and cannot readily aſſent to the opinion. To indulge in conjectures, is contrary to the principles I profeſs; yet I muſt ſuggeſt, that a fever, or the paroxyſm of a fever, terminates, ſtrictly ſpeaking, from a hidden ſomething in the nature of the febrile cauſe, from ſomething which ceaſes to act, or which changes its mode of action after a certain duration. I do not pretend to explain the manner in which this happens. I only add, that the fact is ſupported by probabilities. It was frequently obſerved, in ſuch caſes of fever as terminated fatally, that there was actually a period of time, generally the period immediately preceding a decided fatal termination, where the real preſence of diſeaſe was perceived with difficulty.

difficulty. The patient, however, was unable to recover. Death happened in a very few hours, and it ſeemed to enſue in ſuch caſes, from one of the following cauſes, viz. either from the mechaniſm of a part of vital importance being deſtroyed; from the powers of nature being too much exhauſted to continue life; or perhaps ſtill oftener, from the recurrence of the diſeaſe, in another form, ſpeedily putting a period to exiſtence, while the vital principle was in this weakened ſtate. But though the circumſtances, which I have mentioned, afford grounds for believing that a fever, or the paroxyſm of a fever, is not actually removed from the body, ſolely by the efforts of a vis medicatrix naturæ; yet if we chooſe to proceed further in the inveſtigation, it will be no difficult taſk to involve this opinion, which has hitherto been conſidered almoſt as ſacred, in ſtill greater perplexity. If we admit of the exiſtence of a vis medicatrix naturæ, it will not be eaſy to conceive, how a fever, which has once been expelled from the body, ſhould return again in a given time, or how the alternate paroxyſms of the double tertian, for inſtance, ſhould be of ſuch different duration, or of ſuch different degrees of violence in the ſame perſon; neither can we underſtand, how a fever of one kind ſhould

laſt only ſeven days, another fourteen, and another twenty, or longer:--circumſtances which happen daily, without the leaſt apparent connexion with the innate vigour of conſtitution. We ſhall be equally puzzled likewiſe, if we attempt to explain on the ſuppoſition of this principle, how a fever ſhould continue, while the powers of the conſtitution are vigorous and ſtrong, and ceaſe when they are apparently exhauſted. The above are well known facts, and do not leave any room to doubt, that the termination of fever, or of the paroxyſm of fever, depends on ſome other principle beſides the mere efforts of the vis medicatrix naturæ. Whether this reſides, as was hinted before, in a hidden modification of the nature of the cauſe, which ceaſes to act, or changes its mode of action after a certain duration; or whether, combined with this, the conſtant but imperceptible changes, which are continually going on in the ſyſtem, deſtroy in the frame of the individual, that particular ſtate of aptitude to the febrile cauſe, in which the diſeaſe conſiſts, we cannot determine with certainty; yet it would be obſtinate to maintain any longer, that the cure of fever is owing to general and well directed efforts of nature, expelling a morbific matter or overcoming a prevailing ſpaſm. It is true, that

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an obvious ſolution of ſpaſmodic ſtricture, or the appearance of a morbid matter on the leſs important parts of the body, uſually attend the favourable termination of fevers; yet theſe circumſtances are, in fact, attendants rather than cauſes of criſis. I do not deny, that increaſed diſcharges by different outlets, ſometimes moderate the violence of fever during its continuance, as well as attend its final ſolution; yet it has not, nor perhaps can it ever be demonſtrated, that this proceeds from a regular deſign of nature.

The hints which have been thrown out in the preceding pages, give room for ſuppoſing that the vis medicatrix naturæ, in the ſenſe in which it is uſually underſtood by medical writers, is only a principle of doubtful exiſtence in the conſtitution of the frame; yet though this is certainly true, I do not pretend to deny, that the animal machine is endued with a power, which reſiſts, in ſome meaſure, the derangements of a deſtroying cauſe, and which perſiſts to a certain degree in continuing the action of living. The general nature of the cauſe of fever, or the nature of its various modifications is a myſtery, which we do not as yet know. We only know, that when preſent in a certain ſtate of vigour and activity, it deranges or diſturbs the actions and func-

tions of the ſyſtem; while we likewiſe know that it does not always diſturb every action of every function in the ſame degree. It has occurred too often to have eſcaped the moſt ſuperficial obſervation, that where one part of the body ſuffers particularly, the others are often relieved in proportion. We frequently in this manner obſerve, that general fever is diminiſhed by the appearance of local pain; or, on the contrary, increaſed by its removal. It likewiſe often happens from the ſame principle, that where the ſtomach and biliary ſyſtem ſuffer much, there is leſs diſorder in the other parts: and on the other hand, that where theſe ſufferings are removed or mitigated, the general fever runs higher, and often continues high, till the ſame, or other local affections, are again produced. Thus, though we are totally ignorant of the intimate nature of the cauſe of fever, we ſtill perceive very plainly, that it either poſſeſſes ſomething in its own nature, or accidentally meets with ſomething in the conſtitution of the individual, which determines it to affect the different parts of the body in an unequal degree. It uſually exerts its greateſt force upon parts, which are preternaturally weakened by the general influence of climate, ſeaſon, ſituation, or other accidental cauſes. Hence bilious

appear-

earances are common in the hot months hot climates, pneumonic affection in cold dry weather, greater degrees of vaſcular tement among the temperate and more e races of men; while ſymptoms of ner- affection prevail among the luxurious enfeebled. The above, with other ſpe- of the increaſed action of the cauſe of on a particular part of the body, depend lly, perhaps, on circumſtances of acci- ; yet it has ſo happened, that theſe irre- r determinations have unfortunately been idered as the efforts, which nature em- loys to expel from the body a cauſe, which irbs the economy of health. I ſhall not, reſent, go ſo far as to contend, that theſe minations are not, in fact, intentions of re; but ſhall only beg leave to ſuggeſt, ey actually are intentions, that it is mere ice which determines whether they are ary or fatal. It is a truth which nobody deny, where the force of the diſeaſe is lentally directed to an organ of excretion,) a part of little importance to life, that reſt of the body is often proportionally re- d, and even that a recovery of general th is ſometimes the conſequence; yet the rary is the effect, where the functions of part, upon which the force of the fever has

has been thus accidentally diverted, are of immediate importance to the action of living. The Gout, a diſeaſe, the cauſe of which bears no very remote analogy to the cauſe of fever, may be adduced as affording an illuſtration of this truth. The proximate cauſe of gout, is equally hid from us as the proximate cauſe of fever. We know, however, that the one equally with the other, has a tendency to deſtroy life. We likewiſe know, that there is a power or principle in the conſtitution, which to a certain degree reſiſts deſtruction. The nature of this power, however, is unknown. We are not only in the dark with regard to its nature; but we can only form conjectures about the part where it principally reſides. We, however, clearly perceive its force and activity to be different in different parts of the body. We may next be allowed to remark, that where the cauſe of gout is in a certain ſtate of modification, tumults, (which properly enough may be termed re-action), ariſe in the ſyſtem, and go on to continue till this cauſe or hurtful matter finds an outlet from the body, or a lodgement on one particular part. The outlets from the body are numerous: the parts on which the gout ſeems principally to fix its ſeat, are the extremities, where the power of reſiſtance is ſmalleſt.

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The vital principle, however, becomes weaker as man advances in years; and the cauſe of the diſorder ſeems then frequently to find accommodations in parts, which are leſs remote from the ſources of life. This more eſpecially is the caſe, where tone and vigour have been preternaturally weakened. Hence the ſtomach, the bowels, ſometimes the brain, and even the heart itſelf ſuffer from the immediate action of this diſeaſe, in the later periods of life. But though no perſon perhaps will deny, that the cauſe of gout finds readieſt accommodation, (if I may ſo apply the term) in thoſe parts of the body, where the vital powers are naturally weak, or have been accidently weakened from various cauſes; yet we may add, that it is likewiſe removed from the parts, on which it has been thus fixed, by ſuch applications as excite their active powers; or, in other words, which call forth the local re-action of the ſyſtem. We may alſo obſerve, that tumults ariſe in the general ſyſtem, in conſequence of this repreſſion or repulſion of the morbid cauſe from a particular part; and that they do not in general ceaſe, till an outlet is opened, or accommodation found in ſome other parts of the body. The above appearances, occur daily in the hiſtory of gout. They ſeem to bear a ſtrong analogy to thoſe irregular

irregular determinations, which frequently take place in fevers, and their cauſe perhaps is the ſame. We do not perceive any other law by which they can be explained, than the natural or adventitious ſtate of activity of the powers of life, which reſiſt deſtruction with unequal force in the different parts of the ſyſtem: ſo that we ſhall be obliged to conclude, that thoſe ſufferings, which have hitherto been ſtyled the efforts of nature, are in reality more of the paſſive, than of the active kind.

The circumſtances which I have now mentioned, combat the very exiſtence of the opinion, which has been commonly received with regard to the vis medicatrix naturæ. I have hinted, that the extent and limits of that principle are narrow, and that the ſalutary effects are accidental. I ſhall next endeavour to ſhew, that they cannot, without danger, be made the baſis of the general plan of cure in febrile diſeaſes. The taſk is important, but the attempt may be thought preſumptuous, as an opinion, contrary to that which I advance, has obtained almoſt the univerſal conſent of mankind. I have no deſire of changing names, or of making diſtinctions, where there is in fact no difference. I perfectly acquieſce in retaining the word vis medicatrix naturæ, provided it is limited to a certain mode of re-action,

tion, or to a power in the conſtitution of re-iſting deſtruction unequally in its different arts, in conſequence of which, irregular de-rminations ſometimes prove ſalutary by ac-dent; yet I muſt add, that if we mean to note by this term a ſyſtem of laws, which ive the beſt directed tendency to remove om the body a cauſe which deſtroys health, id endangers life, the opinion has a very ncertain foundation. There are few per-ns ſo ignorant, or ſo blindly devoted to the octrines of αυτοκρατεια as not to own, that the ſually reputed efforts of nature, are often ill irected, ſometimes pernicious; in ſhort, that ney are obviouſly the cauſes of death. The ruth of this obſervation cannot be denied, and nfortunately it obliges the advocates of the is medicatrix naturæ, to grant the conclu-ion, that the laws of the principle are imper-ect. The works of the authour of nature, s far as our limited knowledge can trace them, are univerſally without defect, if ex-amined according to the plan on which they have been originally formed. If they appear otherwiſe, it becomes us to heſitate, before we decide. We may not have comprehended the fundamental principle of the deſign; but we revolt from the idea, that the execution would be left imperfect, had it been intended by the Authour

Authour of our being, that the mechaniſm of the frame would be ſuch, as ſhould oppoſe and remove, in the moſt effectual manner, the derangements of a morbid cauſe. Defect and imperfection can have no place in the works of the Almighty. Had it actually been in the original deſign of our Creator, that the human body ſhould be provided with a ſyſtem of the beſt concerted laws for reſtoring its health, when deranged by the numerous cauſes of diſeaſe, as it is impious to ſuppoſe, that thoſe laws could be defective; ſo we may reaſonably conclude, that the effects of fevers would not then have been fatal. We find however, that fevers, as well as other diſeaſes, are fatal to people of all ages and deſcriptions; and that nature's intentions of cure, if they really are intentions, are often deſtructive to herſelf. I need ſcarcely remind the reader of examples of their pernicious tendency. Vomiting, ſweating, increaſed diſcharges by ſtool, &c. are generally conſidered as the ſalutary efforts of nature: but inſtances are numerous, where the exceſs of thoſe evacuations have obviouſly proved the cauſes of death. In the ſame manner, abceſſes, which in the remote parts of the body, ſometimes attend, and even ſometimes perhaps influence the favourable termination of fevers; in the brain,

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oyed by the change; and it depends wholly
on the accidental importance of the organ,
on which this diverſion has been made,
ether death or recovery is the conſequence.
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hich deſtroy the exiſtence of the individual;
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I have inſinuated, that the efforts of nature
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accidental determinations to different parts
the body; and I may add, that if we en-
avour to inveſtigate the cauſe, which directs
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of force in the different parts of the body. Where there is the leaſt reſiſtance, either from the natural or accidental circumſtances of the conſtitution, there the diſeaſe moſt obviouſly exerts its greateſt force. Hence we are ſufficiently warranted to conclude, that though the ſtructure of the human body is perfect with reſpect to every purpoſe for which it is intended, being only endued with a principle, which reſiſts deſtruction, or perſiſts in continuing life to a certain degree; yet that it is extremely defective, if we conſider it as a machine furniſhed with a ſyſtem of laws, which have an invariable and well directed tendency to reſtore health by the moſt judicious and rational efforts. The reſtoration of health, in conſequence of this re-action, or irregular determination which takes place in the ſyſtem, is only a circumſtance of accident. The ſkill of man ſometimes ſucceeds, where the efforts of nature have obviouſly failed.

SECTION II.

OF THE GENERAL INDICATIONS OF CURE IN FEVERS.

THE vis medicatrix naturæ, has been hitherto eſteemed a principle of much impor-

importance in the cure of febrile diſeaſes. I have attempted to explain its real limits and extent; but am afraid, I may not have done it ſatisfactorily. A tumult which, properly enough perhaps, may be termed a reaction of the ſyſtem, evidently takes place in conſequence of the application of a morbid cauſe; but there ſeems to be little reaſon for believing, that this reaction points out the beſt method of cure, or wholly by itſelf accompliſhes this important buſineſs. But though the reputed efforts of nature are thus defective in accompliſhing the cure of fevers; yet I do not deny, that there is a general tendency in fevers, or in the paroxyſms of fevers, to terminate in a given time, often by a fixed and regular mode of termination. We do not, however, by any means comprehend the cauſe upon which this depends. From the ſimilarity in the progreſs and termination of epidemics, as well as from the ſteadineſs with which various ſorts of fevers purſue their courſe, in ſpite of the moſt oppoſite modes of treatment, we are led to conclude, that there is ſomething peculiar in the modification of the cauſe, which influences the duration of the diſeaſe. This at preſent, is unknown; perhaps is a knowledge which we cannot attain; yet if we take pains to obſerve the courſe of fevers with at-

tention, we may diſcover ſome rules of practical uſe. We know that one ſpecies of febrile diſeaſes, obſtinately purſues its courſe, notwithſtanding every endeavour to oppoſe it; while another is ſo totally under our management, as to be ſtopt ſhort at pleaſure with almoſt infallible certainty. It thus happens, that the intermittent is perfectly under our controul. Over the continued, and even over the remitting fever of Jamaica, I am afraid, we ſhall be obliged to confeſs, that we poſſeſs no very certain power.--But I ſhall examine this ſubject more particularly.

When I firſt arrived in Jamaica, in the year 1774, I found that the practitioners of that country very generally believed, that the courſe of the ordinary endemic fever was checked with great certainty, by the powers of Peruvian bark. This opinion, indeed, is found in every medical book, and it appeared frequently, on the firſt view of the ſubject, to be well founded. No great ſpace of time, however, elapſed before ſome circumſtances were obſerved, which preſented the matter in a different light. I found in many inſtances, that bark was given in the firſt remiſſion, or on the ſecond day of the diſeaſe; in others, it was not given till the third remiſſion, or till the ſixth day from the beginning of the complaint;

plaint; and in ſome again, the fever diſappeared altogether before a ſingle grain of this remedy had been adminiſtered. I was particularly exact in marking the time or the period of the diſeaſe, at which the bark was begun to be given, as alſo the quantity which was taken upon the whole. The reſult was not ſuch as might have been expected. Notwithſtanding the moſt oppoſite modes of treatment, the diſeaſe appeared to terminate or change about the ſame periods, in almoſt every patient. This fact was confirmed in numerous inſtances; and it ſeems to afford a very unequivocal proof, that bark, in the quantity in which it is commonly preſcribed in the Weſt-Indies, has not the effects which are *uſually* aſcribed to it. I do not, however, infer, that this remedy may not be capable, with more deciſive modes of management, of effecting all that has been expected from it. I had not, during the time that I remained in Jamaica, any conception that the ſtomach could have retained, or that it would have been ſafe to have ventured upon the quantities of bark, which I afterwards gave to others, or took myſelf in the intermitting fever of America. Two ſcruples or a drachm, every two hours, is in fact only a ſmall doſe. To this under-doſe, during ſhort remiſſions, we

might perhaps impute the failure of that remedy, in the fevers of the Weſt-Indies. That this actually is the caſe, is confirmed, in ſome degree, by an inſtance which I find recorded among my notes. A young man was ſeized with a fever, about the middle of Auguſt, which ſhewed marks of great violence from the beginning. Bark was given early, and in larger quantity than cuſtomary. The laſt paroxyſm of the diſeaſe, was in ſome meaſure ſuſpended, in conſequence of this proceeding; yet, except that the marks of external fever were obſcure, the patient remained, as uſual, uneaſy and diſtreſſed, till the period at which the criſis was expected; when the marks of final termination ſhewed themſelves diſtinctly. This is the only caſe I met with, where the paroxyſms of the fever of Jamaica were ſtopt, or ſuſpended by the bark; or where external marks of fever vaniſhed without evident ſigns of criſis. It affords only a doubtful proof of the power, which this remedy has been ſuppoſed to poſſeſs, of abſolutely cutting ſhort the courſe of the endemic of that country. But though the bark was ſeldom efficacious in abruptly cutting ſhort the courſe of this diſeaſe; it is no more than juſtice to remark, that it is a remedy which was almoſt every where ſafe, and that it was

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ultimately uſeful in promoting the cure. It imparted in moſt inſtances, where it was employed, a degree of tone and vigour to the ſyſtem--a certain ſomething to the conſtitution; in conſequence of which, the criſis, which we ſhould have expected to be only partial or imperfect, became decided and final. I have ſuggeſted thoſe few remarks, with regard to the virtues of Peruvian bark in the common endemic of Jamaica; if its effects are ſo very doubtful in this diſeaſe, we have no reaſon to expect, that they will be more certain in fevers of a more continued kind.

Beſides bark, the power of which appears to be very precarious, other remedies have been employed by phyſicians, with the view of cutting ſhort the courſe of fevers.--Antimony, under one form or other, has been celebrated for this intention, ſince its firſt introduction into medicine. James's Powder is the moſt famous, and perhaps the moſt effectual antimonial preparation, which, as yet, has been offered to the public. I am ſorry to ſay, that I had not an opportunity of making proper trial of it, in the fevers of the Weſt-Indies; but I can add, that the emetic tartar was often found to be dangerous, ſcarcely ever effectual in cutting ſhort the courſe of the diſeaſe, unleſs given at an early period, or

before the fever had aſſumed a proper form. Its *virtues*, as a febrifuge, were heightened by the addition of opium and camphire. I am ſorry alſo to remark, that I cannot ſpeak with confidence of the virtues of James's Powder, in the intermitting fever of America. Emetic tartar was frequently employed, but it did not by any means anſwer the expectations which were entertained of it. I acknowledge, that it might be ſo managed, as apparently to prevent the return of a particular paroxyſm; but the inſtances, where it completely removed the diſeaſe, were ſo rare, that I do not conſider it as poſſeſſed of very eminent virtues. I have had frequent opportunities, ſince my return to Britain, of trying James's Powder in the continued fevers of this country; and the reſult of my experience inclines me to believe, that this remedy, when given at an early period, has ſometimes actually carried off the diſeaſe. It appeared likewiſe, when exhibited near the critical periods, to render the criſis more complete; but I have little cauſe for thinking, that it ever cut ſhort a fever in the midſt of its courſe. Thus it appears, that theſe two celebrated remedies,—bark and the various preparations of antimony, are, in fact, leſs effectual in cutting ſhort the courſe of febrile diſeaſes, than has been commonly

monly ſuppoſed; I cannot, however, abandon the idea that the purpoſe, which has been expected from theſe remedies, may ſtill be obtained by other means. Galen mentions ſome inſtances, where he extinguiſhed the fever by copious evacuations: authours mention many, and I have myſelf ſeen ſome, where drinking plentifully of the coldeſt water, produced the ſame effects. The alternate uſe of warm and cold bathing occaſions great changes in the ſtate of the conſtitution: and from the trials, which I have made of theſe applications, I do not entertain a doubt, that they may be ſo managed, as to ſhorten very materially the duration of fevers. I do not however promiſe, that they are capable of being ſo conducted, as infallibly at once to ſtop the diſeaſe in its progreſs. This can only be accompliſhed by thoſe great and remarkable changes, which deſtroy a certain aptitude, in the ſtate of the ſyſtem, to the morbid cauſe, in which the diſeaſe is ſuppoſed to conſiſt. But I muſt at the ſame time confeſs, that as we neither know the nature of this aptitude, nor the particular nature of remote cauſes, ſo every attempt of cure on this plan, as it muſt be at random, cannot be adopted without danger. It is a view, therefore, which will not be proſecuted with ſafety, while our knowledge of

the nature of morbid cauſes, and of the laws and ſtructure of the human frame, is ſo imperfect.

It is evident from the facts which I have related in the preceding pages, that we cannot ſafely truſt the cure of fevers to thoſe tumults, or irregular determinations in the ſyſtem, which are uſually ſtyled the efforts of nature: neither does it appear, that we can depend on the efficacy of any one remedy, we are yet acquainted with, as poſſeſſed of the power of abruptly cutting ſhort their courſe. We ſtill however perceive, that theſe diſeaſes have a general tendency to terminate in a given time, and ſteadily to go through a regular progreſs, in ſpite of the greateſt exertions of art. If we review the practice which medical people have followed in fevers, from the days of Hippocrates to the preſent times, we meet with ſuch contradictory methods of treatment, as render it impoſſible to avoid pronouncing, that if one man had actually ſaved life, another's endeavours ſeemed as if intended to deſtroy it: yet few authours have ventured to offer the fruits of their labours to the public, without previouſly boaſting more ſucceſsful methods of cure, than were known to their predeceſſors. Hence, if we are not ſometimes diſpoſed to doubt their veracity,

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we can hardly avoid concluding, that their practice had been feeble, and of ſmall effect. We lament, with reaſon, that medical facts are frequently of little value: nay, that they oftener miſlead, than guide us in the way to truth. An overfondneſs for ourſelves is, perhaps, more the cauſe of this, than real want of candour; the natural propenſity of the human mind to flatter itſelf, diſpoſing us to attribute cures to remedies, which were adminiſtered near the critical periods of the diſeaſe; while twenty inſtances, where ſimilar treatment produced no apparent effect, are inſenſibly blotted from the memory. This at leaſt was the caſe with myſelf. I flattered myſelf in many inſtances, that I had actually ſaved life:--I now find, on maturer reflexion, that I had in reality done no material good. Thus it frequently happens, I believe, that practitioners boaſt of cures, to which they have no right; at the ſame time I am convinced, that they are frequently charged with deaths, of which they are innocent. The life of man does not appear to depend upon ſo ſmall a matter, in febrile diſeaſes, as is generally imagined; and is not often preſerved or endangered by the routine of common practice. It is not always eaſy to know exactly the real effects of treatment; neither has the road,

road, which leads to this knowledge, been purſued with ſufficient induſtry. Fevers occur frequently, and on that very account, have been traced leſs minutely in their courſe, than ſome other diſeaſes. There are few practitioners, who write down in the preſence of the ſick, a minute and accurate hiſtory of the various caſes of fevers, which come under their care; who obſerve carefully the changes, which happen from day to day; who note the particular methods of cure, and the effects which ariſe in conſequence of every alteration of treatment. Yet, unleſs all theſe circumſtances are attentively conſidered, we cannot hope to form concluſions, which are in any degree to be depended upon. If we defer making remarks till the patient recovers or dies, difficulties will be eaſily got over, and ſuch facts as contradict opinions, in which we have long believed, will be more eaſily reconciled, as being leſs perfectly remembered. Hence it is that a man may continue a very extenſive practice, for a very long life, without ever once getting a view of the real truth.

As from what has been ſaid before, little doubt can remain of the precarioufneſs of truſting the cure of fevers to the ſimple efforts of nature; or, if we except intermittents, to the efficacy of particular remedies, which

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cut off their courſe abruptly, it remains to look out for ſome other principle, which may ſerve us as a guide in the conduct of our practice. It is a truth to which we may accede without heſitation, that the cauſe of fever, as I have mentioned before, whatever it is, or however modified, has a general tendency to deſtroy the powers of life; while we likewiſe know, that there is a principle in the mechaniſm of the frame, which reſiſts deſtruction to a certain degree. We alſo know, that the cauſe of the diſeaſe differs in degree of force; and that it is differently modified according to various circumſtances; as we likewiſe obſerve, that the principle of life, or power of reſiſtance, is different in activity, in the different parts of the body. To theſe two powers, viz. the force of the morbid cauſe and the powers of the conſtitution, our views in practice muſt be principally directed. Hence we may eſtabliſh a general rule, that wherever the force of the morbid cauſe is weak; at the ſame time that the powers of life in the general ſyſtem, and particularly in the organs of vital importance, are ſtrong and active, we have nothing more to do than to look on. On the contrary, where the cauſe of the diſeaſe is of unuſual force, or where the powers of life are preternaturally weak, our inter-

interference ought to be ſpeedy, bold and decided. In other words, we leave the buſineſs chiefly to nature, or take it entirely out of her hands. It is this which a practitioner muſt firſt determine, when called upon to give his aſſiſtance to a patient labouring under a fever. If the powers of the conſtitution appear to be equal to the taſk, our interference would be officious, and perhaps might prove hurtful. If aſſiſtance is neceſſary, it ought to be our principal aim to render it complete; but in proſecuting this view, we meet with much difficulty and impediment. We are not yet acquainted with any one remedy, which has a certain and infallible power of cutting ſhort fevers in the midſt of their courſe. It is not therefore abſolutely in our power to take the buſineſs entirely out of the hands of nature. We can, in fact, go no farther, than to oppoſe her pernicious efforts; or to obviate the fatal tendencies of the diſeaſe. The fatal tendencies of the diſeaſe, are variouſly modified, and the means by which they muſt be obviated, are ſometimes directly oppoſite. Two general modes, however, of the fatal action of fevers may in moſt inſtances be diſcovered. The cauſe of the diſeaſe, in one caſe, exerts its influence on the ſources of life and motion; in the other, the ſtructure of an organ

organ of leſs importance is deſtroyed, and death happens only from a ſecondary effect. There is perhaps no fundamental difference in theſe different modes of action; yet the indications of cure, which ariſe from this view, are totally oppoſite. In the firſt inſtance, it is neceſſary to excite, and to ſupport the general powers of life:--an indication of very great extent. In the other, it is ſometimes neceſſary to diminiſh the general reaction of the ſyſtem; to obviate irregular determination, and to oppoſe with vigour the tumultuary efforts of nature.

CHAP.

CHAP. X.

OF THE PARTICULAR CURE OF THE FEVER OF JAMAICA.

I SHALL begin this ſubject with obſerving, that the fever, which prevailed in the diſtrict of Savanna la Mar, was naturally a diſeaſe of the remitting kind; yet circumſtances were ſometimes connected with it, in ſuch a manner as prevented it from aſſuming its proper form. To remove thoſe circumſtances, which thus maſked or concealed the real genius of the diſeaſe, was conſidered as the firſt ſtep towards a cure. The accompliſhment of this purpoſe, however, was ſometimes difficult; neither could it always be effected by the ſame means. Thus it happened frequently in caſes, where there was exceſs of excitement, or a high degree of inflammatory diatheſis, that the remiſſions were ſcarcely perceptible; as it was likewiſe obſerved, that where there was a want of reaction, the paroxyſms were often languid and obſcure. In the one caſe, the remiſſions diſcovered themſelves in conſequence of bleeding, dilution and copious evacuation;

cation; in the other, wine and cordials determined the diſeaſe to aſſume its proper genuine form.

In the firſt place, evacuations were uſually employed as the means of procuring remiſſion, where the inflammatory diatheſis prevailed in exceſs; I may add, that they were proper for the moſt part, and that they ſeldom failed of producing the effect. Bleeding was frequently neceſſary, and generally of ſervice. Its efficacy, however, was often heightened by particular modes of management. Thus relaxation of ſpaſms, and removal of inflammatory diatheſis, more certainly followed bleeding, if the blood was drawn from a large orifice; if the patient was placed in an erect poſture, during the operation; and more certainly ſtill, if the lower extremities were at the ſame time immerſed in warm water. When bleeding had been premiſed, and repeated according to the circumſtances and urgency of the caſe, it was then cuſtomary to open the body freely: for which purpoſe, I have not found any thing anſwer better, than a thin ſolution of Glauber or Epſom Salts, with a ſmall portion of emetic tartar. The operation of this medicine was extenſive. It might be ſo managed as to occaſion nauſea, or moderate vomiting; to operate briſkly downwards,

wards, or to promote a gentle diaphoreſis. Remiſſions were generally the conſequence of this method of proceeding, where there was no defect in the manner of conducting it. But where it ſo happened, that the circumſtances of the patient forbad the uſe of this laxative; or where it might not be proper to carry it to a ſufficient length, benefit was derived from a powder, compoſed of nitre, camphire, emetic tartar and opium, given in pretty large doſes, and repeated frequently. Remiſſion, at leaſt a great abatement in the violence of ſymptoms, was generally the conſequence of this plan of treatment; particularly, if aſſiſted by the plentiful dilution of watery liquors, by warm bathing and by large glyſters of ſimple water. It is ſuperfluous to mention the uſe of bliſters in caſes of local affection; but it will be leſs expected, that this remedy ſhould be recommended in fevers, where there is an exceſs of the general inflammatory diatheſis.--I can, however, bear teſtimony to its efficacy. The manner by which bliſters produce their effects, is not yet agreed upon among authours; neither do I pretend to throw any new light upon the ſubject; but I would beg leave to ſuggeſt, that the mode of affording relief in the preſent caſe, at leaſt, did not ſeem to be much unlike the effect of local

local affections, in conſequence of which the violence of fevers is ſometimes obſerved to ſubſide.

I purſued the above method of procuring remiſſion in thoſe fevers, where there was real inflammatory diatheſis prevailing in exceſs; but it ſo happened, that the ſigns of this diatheſis were fallacious, appearing in ſome inſtances to be preſent, though the real genius of the diſeaſe was actually of a different nature; a circumſtance, which occaſioned a difference of management in conducting the method of cure. Exceſſive evacuations were not only unſafe in ſuch caſes, but in general had not any powerful effects in diſpoſing the diſeaſe to aſſume a remitting form. Bleeding, however, was often found to be neceſſary, though it was ſeldom requiſite to repeat the operation. The good effects which were obſerved to follow the uſe of cathartics, were not in general very remarkable; yet it was proper, in moſt inſtances, to open the body freely; for which purpoſe, no form of medicine, with which I am acquainted, anſwered better than a ſolution of ſalts with a ſmall portion of emetic tartar, and ſometimes with the addition of laudanum. In caſes of local pain, bliſters applied near the ſeat of affection were always of eminent ſervice; and in caſes

of general irritability, they were often equally uſeful, when applied to the back part of the head and neck. A powder compoſed of nitre, camphire, emetic tartar and opium, was likewiſe employed with ſucceſs; but the liberal uſe of warm bathing, was ſtill more to be depended upon. No perſon, perhaps, will refuſe conſent to the method of proceeding, which I have hitherto recommended; but when I mention a free and bold uſe of cold bathing, even in an early ſtage of this fever, I do not expect the ſame conceſſion. To daſh cold water on the head and ſhoulders of a perſon in a fever, has an appearance of raſhneſs and hazard. I can, however, produce the teſtimony of repeated experience for the ſafety of the practice, no leſs than for its ſucceſs in procuring remiſſion; and ſhall therefore conſider it a duty to recommend it warmly to the public. Wherever it was employed,--and the caſes in which it was tried were numerous, a calm and equable perſpiration, additional tone and vigour, with great abatement of irritability, were conſtantly obſerved to enſue.

The paroxyſms and remiſſions were generally diſtinct in the beginning of fevers, where the nervous ſyſtem was principally affected; but often became leſs ſo, as the diſeaſe advanced

vanced in its progreſs; a circumſtance which did not ariſe oftener from the nature of the complaint, than from the common method of treatment. Bleeding was often diſpenſed with in the fevers of the Weſt-Indies; but vomiting and purging were indulged in with freedom. The diſtinction of paroxyſm and remiſſion was ſometimes evidently rendered obſcure by this practice; while it was likewiſe obviouſly reſtored again, by the uſe of wine and cordials, which excited the powers of life. In this ſpecies of diſeaſe, evacuations were ſeldom neceſſary; ſeldom indeed admiſſible in a great extent. Bleeding, unleſs under particular circumſtances, was totally improper. Cathartics were ſometimes dangerous, and antimonial vomits often ſunk the patient irrecoverably. Bliſtering, on the contrary, even at an early period, was generally of ſervice; as alſo were opiates, and a judicious uſe of the warm bath; but cold bathing with ſalt water, was, of all others, the remedy of the moſt powerful effect. I do not pretend to ſay, that it abſolutely ſtopped the courſe of the fever; but I can ſay with truth, that it generally reſtored the diſtinction of paroxyſm and remiſſion, diminiſhed irritability, and imparted a degree of tone and vigour to the

ſyſtem, which was juſtly conſidered as a ſign of ſafety.

To procure remiſſion in fevers, diſtinguiſhed by a prevalence of the putreſcent tendency, is not in every inſtance an eaſy taſk. A remitting fever, with marks of ſpecific putrefaction, is not a diſeaſe of common occurrence in Jamaica; but a fever with ſigns of putrefactive tendency, mixed with ſymptoms of great irritability, or a high degree of malignity, is not altogether rare. From the complicated nature of the diſorder, the indications of cure are often difficult and perplexed. Bleeding is univerſally condemned; more, I believe, from theory than from actual obſervation. It was, and perhaps ſtill is, a faſhionable mode of reaſoning, to impute the languors and other marks of debility, which are common in the fevers of the Weſt-Indies, to a putreſcent tendency in the ſyſtem. Such ſymptoms, however, are in fact more generally the attendants, or diſtinguiſhing ſigns of fevers, where the nervous ſyſtem is affected. In ſuch caſes, bleeding is obviouſly hurtful; in the one of which we now treat, (where ſuch a diſeaſe actually exiſts,) it is not only a remedy of ſafety, but of very eminent ſervice, previous to the application of cold, particularly previous to cold bathing, which may

may be uſed with freedom and boldneſs. Cold bathing, indeed, is the remedy on which we muſt principally depend. There are others, which do good occaſionally; but this is the only one I know, which has any very conſiderable effect in changing the nature of the diſeaſe. There is a general rule in the practice of medicine, which requires to be particularly remembered in thoſe complicated ſpecies of fever, viz. that as the indications of cure are often embarraſſed; ſo the appearances, which principally point to danger, are firſt to be attended to; while the plan of cure, which we determine to be the moſt proper, muſt be followed up with vigour and reſolution. We ought always to bear in mind, that in dangerous and difficult caſes, feeble remedies, or even powerful ones timidly uſed, are of little avail. Cold bathing, employed with timidity, failed of doing good in ſome inſtances. I met with no example, where the boldeſt uſe of it did harm. It was ſeldom, I muſt again repeat, that it did not ſucceed in obviating irritability, in checking the putreſcent tendency, and in imparting to the ſyſtem that degree of tone and vigour, in which ſafety is obſerved to conſiſt.

The method of procuring remiſſion, in thoſe fevers which were diſtinguiſhed by local af-

fections, or irregular determinations to particular parts, was nice, and ſometimes difficult. Bleeding was frequently proper, eſpecially, if there ſubſiſted at the ſame time marks of a general inflammatory diatheſis; but it was ſeldom ſufficient wholly to accompliſh the buſineſs. However, together with a judicious management of warm bathing, it greatly heightened the good effects of bliſters, the remedy on which the principal dependence was placed. In fevers, which were accompanied with uncommon pain of the head, I have ſometimes found it ſerviceable to apply cold to the part affected; the feet being at the ſame time immerſed in warm water, and blood flowing by a large orifice from the arm. I alſo frequently obſerved, that the general fever ran higher, though it likewiſe more certainly aſſumed its proper form, in conſequence of bleeding, bliſtering, and the removal of local pain. In thoſe fevers, where bilious appearances were the effect of accidental, irregular determination to the ſtomach or liver, the remiſſions were often obſcure: neither did the method of treatment, which was generally adopted, ſeem to be well calculated to bring forth the natural, genuine appearance of the diſeaſe. Bilious appearances, it muſt be owned, ſometimes vaniſhed; while the

the type of the fever became more diſtinct after the exhibition of an emetic or briſk cathartic; yet there is cauſe to doubt if this depended on the evacuation of bile. It might be ſaid, with more truth, perhaps, that the action of the emetic, by exciting the powers of the ſtomach and biliary ſyſtem, effected a change in the irregular determination, which had formerly taken place to thoſe parts. It was generally obſerved, where good effects did not follow the firſt exhibition of remedies of this kind, that harm was uſually the conſequence of a ſecond. Vomiting, in ſhort, was often rendered continual, and the diſtinction of paroxyſm and remiſſion was apparently deſtroyed, in conſequence of the operation of violent emetics. Inſtructed by repeated examples of their hurtful effects, I at laſt ſcarcely ever employed antimonial vomits; even the ſafeſt kinds were uſed with caution. If it appeared, at any time, that the action of vomiting would be ſerviceable, camomile tea, or at fartheſt, a few grains of ipecacuanha were generally thought ſufficient for the purpoſe. When this buſineſs was finiſhed, a draught of cordial ſtimulating liquor, which had a tendency to promote a diaphoreſis, was next adminiſtered. By this mode of treatment, eſpecially if a bliſter was applied at the ſame time to the

region of the liver, I have the ſatisfaction to add, that the bilious appearances for the moſt part vaniſhed, and, if care was taken to ſupport a determination to the ſurface, ſeldom ever returned during the continuance of the fever. Different ſeaſons, and different ſituations of country were particularly diſtinguiſhed by correſponding determinations. Thus a tendency to the bowels and biliary ſyſtem was chiefly remarkable in the autumnal months, and in low and champaign countries; the head and breaſt were oftener affected in the winter months, and in hilly ſituations.

I obſerved before, that it is the firſt object in the cure of fevers, to remove thoſe circumſtances, or accidental ſtates of the body, which hinder the diſeaſe from aſſuming its proper form. Thus, to procure remiſſion, appeared univerſally to be the firſt buſineſs in the cure of the fever of Jamaica; the next, and a very important one, is to prevent the return of the paroxyſm. If we knew a remedy, which could be depended upon to accompliſh this purpoſe with certainty, the cure of the diſeaſe would be eaſy; but the Peruvian bark, which almoſt infallibly ſtops the courſe of intermitting fevers in all countries, does not ſeem ſo indiſputably to poſſeſs the ſame power over the uſual endemic of the Weſt-Indies.

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I am ſorry to own, that my knowledge on this ſubject, is not altogether ſatisfactory. At the time I left Jamaica, I did not entertain a doubt, that the endemic of the diſtrict, where I reſided, poſſeſſed ſomething in its own nature which decidedly determined its duration. It was uſually obſerved to terminate on a critical day, generally by very evident ſigns of criſis, and without ſeeming to be materially affected, in its courſe, by the various and oppoſite modes of treatment, which were ſometimes purſued. But though this was true for the moſt part; yet the ſuperior efficacy of the very large doſes of bark, which I afterwards ventured to give in the intermitting fevers of North America, obliges me to ſpeak with heſitation, when I mention the powers of that remedy. It is probable that bark, with the ſame management, might have had the ſame effects, in the fever which prevailed at Savanna la Mar, as in that which is commonly epidemic in Georgia and the Carolinas; yet no doubt remains, that as commonly employed in Jamaica, it has no right to be conſidered as a remedy, which abruptly cuts ſhort the courſe of the diſeaſe. In every caſe where it was tried, (except one) it did not ſeem to do more than give a degree of tone and vigour to the ſyſtem, to excite a certain ſtate of inflam-

inflammatory diatheſis, in conſequence of which, the criſis was obſerved to be more perfect and complete, though it did not perhaps actually happen at an earlier period. Thus I am diſpoſed to conclude, from all the experience which I have had, that bark is not generally carried farther, in the cure of the remitting fever of Jamaica, than merely to ſupport the tone and vigour of the powers of life. If we truſt to it for more, in doſes of two ſcruples or a drachm given every two hours, we ſhall certainly be deceived.

Having mentioned the different methods of treatment, by which it was attempted to procure remiſſion in the endemic fever of Jamaica, and having likewiſe endeavoured to aſcertain how far we can go in preventing the return of paroxyſms; it only remains to detail ſome particulars in the management of the plan of cure, where the different ſpecies of fevers were diſtinguiſhed by a peculiar train of ſymptoms. It was obſerved in general, that fevers, with a moderate degree of inflammatory diatheſis, ſeldom required our interference. The diſeaſe, after a certain duration, terminated uſually of its own accord. After I had gained ſome experience of the general courſe of fevers, I uſually allowed thoſe, in which I did not perceive marks of danger, to

go

n their own way, that I might better ver thoſe periods, at which the diſeaſe naturally diſpoſed to terminate. Thus, re the paroxyſms continued regular and nct, the remiſſions perfect, and the vi- r unimpaired, nothing material was at- pted to be done. On the contrary, where paroxyſms were long, or leſs diſtinctly ned, with ſigns which indicated an ap- ching affection of the nervous ſyſtem, , and other remedies, which excited and ported the powers of life, were given with earlieſt opportunity. Changes from in- mmatory diatheſis to nervous affection, e obſerved to happen frequently on the h day. Bark, and ſuch remedies as im- ted tone and vigour to the ſyſtem, were n without delay; and the diſeaſe termi- ed for the moſt part on the ninth. In thoſe es, which were of a complicated nature, which ſigns of inflammatory, nervous, or rid diatheſis were variouſly mixed, bliſters lied in different manners, opiates, bathing l antiſpaſmodics were often materially uſe- ; but it would be arrogance to attempt to cribe rules for the particular mode of ap- ation, which muſt vary more or leſs in al- ſt every caſe, and which only can be learned n actual obſervation. There is one rule, however,

however, in the treatment of fevers, of which the practitioner ought never to loſe ſight, viz. that wherever it is neceſſary to interfere, it is only the moſt vigorous deciſion which can do good. We cannot, as was ſaid before, depend with certainty upon bark, as a remedy poſſeſſed of the power of abſolutely cutting ſhort the courſe of the fever of Jamaica; yet wherever the fevers of that country diſcovered ſigns of nervous affection, I do not know any thing in the materia medica, from which ſuch beneficial effects may be expected. If it did not actually ſtop the diſeaſe, it was eminently ſerviceable in conducting it to a favourable iſſue. Opium, wine, ſnake-root, &c. were often obſerved to heighten its good qualities: but the particular uſe of ſuch additions can only be regulated by circumſtances. Wine has been freely recommended in fevers with ſymptoms of nervous affection; and it muſt be owned, that its good effects were conſiderable, not only in real debility, but wherever the cauſe of the diſeaſe acted by weakening or depreſſing the powers of life. Wine was likewiſe obſerved to be more uſeful in caſes of mobility and weakneſs, than in caſes of ſtupor and ſuſpenſion of the nervous influence. But though it is actually a remedy of great value, its virtues appear to have been greatly

greatly enhanced. In many inſtances, it was not proper in any quantity; in ſome, it was only proper in a ſmall quantity, and in very few, perhaps, could we allow of the quantities which are given in common practice. At one time I carried the uſe of wine in the nervous fever of Jamaica, to a very great length; but I afterwards learnt, that a third part of the quantity would have probably anſwered the purpoſe better. Though it undoubtedly is an uſeful cordial and tonic, it is ſtill inferior to cool air, and particularly to cold bathing.

In thoſe treacherous and malignant fevers, which I have deſcribed in the third ſection of the ſixth chapter, the ordinary medical aids were often feeble and inſufficient. The courſe of the diſeaſe was generally rapid. There was little time left for deliberation; and where the firſt, at leaſt where the ſecond remiſſion paſſed over, without ſome bold and decided ſteps to prevent the return of the paroxyſm, or change the nature of the ſymptoms, the opportunity was probably never again in our power. The type of this malignant fever was uſually of the ſingle tertian kind; yet it was often found to anticipate, by ſuch long anticipations, that the ſecond paroxyſm ſometimes made its appearance, before any decided

ded ſteps were taken by the practitioner to ſtop its progreſs, or often, indeed, before there were any ſurmiſes of danger. As this diſeaſe ſeemed to have a nearer reſemblance to the intermittent, than ſome other ſpecies of the endemic of Jamaica; ſo bark appeared to be capable of producing more effect, in the preſent inſtance, than in thoſe caſes where the remiſſions were more obſcure. It ſtill, however, deſerves to be remarked, that ſuch ſcanty doſes, as were uſually given in Jamaica, could not be effectual; indeed, we could ſcarcely hope, that any powerful alteration could ariſe from leſs than half an ounce given at the ſhort interval of every other hour. I confeſs candidly, that I never ventured ſo far; yet I alſo confeſs, that I am by no means ſatisfied with the ſucceſs of the method of cure, which I adopted at firſt, in this diſeaſe. I loſt ſome patients before I was aware of danger, and perhaps ſuffered others to die, from a dread of ſtepping over the bounds of common practice. At laſt, I acted with more decifion; and have cauſe to be ſatisfied with the ſucceſs of the attempt. As ſoon as I diſcovered the malignity of the diſeaſe, the marks of which, for the moſt part, were plain in the courſe of the firſt paroxyſm, the head was immediately ſhaved, and covered with a bliſter, which reached

hed half way down the neck; the feet
e likewiſe put into warm water, previous
he expected return of the paroxyſm; the
y was rubbed with brandy or rum; wine,
ſometimes opium were given in quantity
cient to exhilirate the ſpirits, or to pro-
e a low degree of intoxication; bark was
preſcribed in larger doſes than uſual, du-
g the remiſſions; and cold bathing was oc-
onally employed with freedom. I do not
that the return of the paroxyſm was ab-
tely prevented by this method of treat-
nt, but I have the ſatisfaction to add, that
fatal tendency of the diſeaſe was evidently
iated by it.

I muſt farther obſerve, that bark has been
ſidered as the principal remedy in thoſe
ers, the nature of which has been believed
be putrid; but the great fame of this re-
dy has proceeded from theory, rather than
n actual obſervation. A real putrid diſ-
e, (as I have ſaid before), if we except the
low fever, occurs very ſeldom in Jamaica.
nptoms of languor and debility, however,
frequent in the fevers of that country; ap-
rances which, though in fact, only ſigns
nervous affection, have often been imputed
a putrid tendency in the habit. Bark has
n found to be efficacious in thoſe caſes of
languor

languor and debility, which have been falſely thought to ariſe from a putrefactive tendency in the ſyſtem. Hence this remedy has gained credit, on a foundation which does not exiſt. I may add with truth, that the power of the bark was very equivocal, in thoſe caſes where the marks of putrid tendency were obvious. The principal dependence was then conſtantly placed in the cold ſalt-water bath; which, if well managed, produced moſt aſtoniſhing effects. An additional quantity of ſalt was often added to the water of the ſea; and care was taken that the coldneſs ſhould be as great as the circumſtances of the climate would permit. The chief dependence I have ſaid, was conſtantly placed in this remedy, where the putrid tendency prevailed in the general ſyſtem; but where it was more particularly confined to the bounds of the alimentary canal, ſaline draughts, in the ſtate of effervescence, were uſeful, as were likewiſe glyſters of cold water impregnated with fixed air. It is ſuperfluous to mention cool air, clean linen, cold drink and the liberal uſe of wine.

The remedies, which I have hitherto mentioned, are ſuch, as ſeem chiefly intended to ſupport and invigorate the general powers of life; but which are leſs immediately directed to obviate the fatal tendency of particular ſymptoms;

ſymptoms; which I propoſed to conſider, as the ſecond indication of cure. I ſhall probably depart materially from the uſual ideas of practitioners in the proſecution of this ſubject. I do not deny, that bark may be given with ſafety in fevers, which are accompanied with local affections, or irregular determinations to particular parts; yet I muſt likewiſe obſerve, that bark is not the remedy on which the weight of the cure depends. Local affections, or irregular determinations are often diſtinguiſhed by the name of the efforts of nature. I do not indeed diſpute, where the part of the body, to which the determination takes place, is of little importance to life, or more certainly, where it is an organ of excretion, that ſuch parts as are of greater conſequence, are, in ſome degree relieved in conſequence of this effect; and though there is ſtill an impropriety, there is leſs danger in conſidering this irregular action of the morbid cauſe, as an effort of nature, or a quality of the vis naturæ medicatrix, by means of which, the health of the ſyſtem is eventually rendered more ſecure. This, however, is only a circumſtance of accident. It does not appear to depend upon a regular deſign of nature, and cannot be admitted with ſafety as the baſis of a plan of cure. We find, in ſhort, that

though the life of the whole is ſometimes preſerved by it, the deſtruction or derangement of the part is generally the conſequence. But that the fallacious tendency of thoſe tumultuary efforts of nature may be more clearly illuſtrated, I ſhall adduce the example of fevers, diſtinguiſhed by an increaſed ſecretion of bile. It is an opinion, which ſeems to date its origin from Hippocrates, that bile vitiated in quality, or redundant in quantity, deſerves to be conſidered as the cauſe of the ſpecies of diſeaſe diſtinguiſhed by the name of ardent fever: and it muſt be confeſſed, that the frequent appearance of bilious diſcharges, in the fevers of hot climates, gives countenance to the ſuppoſition. From the frequency of this ſymptom, perhaps, the practitioners of the Weſt-Indies adopted the idea, that bile is the cauſe of the fever of that country; while the method of cure, which they uſually purſue, has ſerved to confirm them in their error. Prepoſſeſſed with an opinion of the prevalence of bile, they adminiſter cathartics and emetics with a liberal hand. If bile appears in the firſt evacuations, they conſider it ſufficient authority to proceed; if it does not appear, they conclude that the remedy has not been of ſufficient force to reach the ſeat of the diſeaſe; and therefore perſiſt

peaſiſt in their intentions, till the effect is at laſt produced. It is well known, that a repetition of cathartics and emetics ſeldom fails to produce the appearances of a bilious diſeaſe. Hence this ſymptom of fever, and all the dangers which follow it, are frequently the work of our own hands. That this is the caſe, appears from a relation of the method of cure, which I uſually adopted in ſuch fevers as were diſtinguiſhed by ſymptoms of this nature at an early period. Inſtead of encouraging the vomiting, or promoting the evacuation of bile downwards, I generally did every thing in my power to moderate, or even to check it. Sometimes I preſcribed an emetic; but it was more with a view to excite the action of the ſtomach and biliary ſyſtem, than to promote an evacuation of redundant or vitiated humours. After the operation of vomiting was finiſhed, a bliſter was uſually applied to the region of the liver, and ſuch a plan of cure was purſued, as ſupported a determination to the ſurface of the body, and gave tone and vigour to the ſtomach and general powers of life. By this mode of treatment, bilious appearances vaniſhed ſpeedily, or ceaſed to be troubleſome; while by the repeated uſe of emetics and cathartics, they generally continued long, and often prevailed

throughout the courſe of the diſeaſe. We may thus, I hope, conclude, without any unnatural inference, that there appears to be danger in encouraging thoſe tumults, which have been uſually conſidered as the efforts of nature. If they are in fact efforts, no perſon can pretend to deny, that they are generally precarious; nay, that they are often the immediate cauſes of death.

I have now detailed the particular ſteps of the method of cure, which I adopted in the remitting fever of Jamaica; a diſeaſe which I treated, in ſome reſpects, on a different plan, and if ſelf-love hath not blinded me with more ſucceſs than the generality of thoſe practitioners whom I had the opportunity of knowing, I treated the diſeaſe with ſucceſs; but I dare not affirm, as ſome have done, that under this method of treatment, I never loſt a patient. I proceeded, indeed, with diffidence and diſtruſt of the powers of the medical art; venturing no farther than to ſupport the general powers of life, and to obviate ſymptoms of a fatal tendency. Many pretend to cut ſhort the courſe of fevers, by the force of a ſingle remedy; but the means do not appear very obvious, and the effect was often precarious. I grant, that it is ſometimes in the power of the practitioner to exterminate the

cauſe

cauſe of diſeaſe by forcible means, or to deſtroy a certain aptitude of conſtitution, in which this diſeaſe may be ſaid to conſiſt; but I muſt at the ſame time obſerve, that there is danger likewiſe, leaſt he extinguiſh life. The bark, which has been ſo much celebrated for checking the courſe of fevers, though generally ſafe, is ſeldom effectual: others are frequently dangerous. During the time that I remained in the Weſt-Indies, I obſerved attentively the ſtate of body, which uſually attended recovery; as likewiſe thoſe appearances which preceded, and apparently were the cauſes of death. Tone and vigour, or a moderate degree of the ſtate of body diſtinguiſhed by the name of inflammatory diathefis, without local affection, afforded the ſureſt ſigns of ſafety;--general failure of the powers of life, or irregular determinations to organs of importance, were the moſt certain appearances of danger. Thus, after obviating particular ſymptoms of a fatal tendency, it was the principal indication to ſupport the general powers of life, or to excite the tone and vigour of the ſyſtem. This was beſt accompliſhed by bark, wine, cool air, and above all, by cold bathing, which I am induced to conſider as the moſt important remedy in the cure of the fevers of the Weſt-Indies; and,

perhaps, in the cure of the fevers of all hot climates. Though it might not abſolutely cut ſhort the courſe of the diſeaſe; yet it ſeldom failed to change the fatal tendency of its nature.

CHAP.

CHAP. XI.

YELLOW FEVER. (a)

THE diſeaſe, known in the Weſt-Indies by the name of yellow fever, particularly that ſpecies of the diſeaſe diſtinguiſhed by black vomiting, has not, ſo far as I know, been deſcribed by the practitioners of any other country. In the autumnal fevers of moſt climates, indeed, as well as in the remitting fever of Jamaica, yellowneſs is not by any means uncommon: neither is vomiting of matter of a dark colour altogether rare, in the moments preceding death: yet in as much as I can judge, from what I have ſeen myſelf, or heard from others, the complaint, which is the ſubject of the preſent treatiſe, poſſeſſes ſome characteriſtics of its own, different from thoſe of every other diſeaſe. I do not pretend to determine, in what this characteriſtic difference preciſely conſiſts: yet I may ſay with confidence, that the ſpecies of this diſeaſe, which terminates in black vomiting, may be diſtinguiſhed with certainty from the autumnal fever of aguiſh countries, or from the en-

demic remitting fever of Jamaica, even in the firſt hours of its attack. I muſt, however, at the ſame time own, that there is a ſpecies of diſeaſe, where the remiſſions are obſcure, and where ſigns of nervous affection, or even ſometimes of apparent inflammation, are more conſpicuous than ſymptoms of putreſcency, that I have ſome difficulty in claſſing properly. There is not any thing more foreign to my intention, than multiplying names, or eſtabliſhing diſtinctions which do not exiſt in reality; yet, as I have often ſeen inſtances of fever, to which yellowneſs and black vomiting did not ſeem to be eſſential; but in which paroxyſms and remiſſions were extremely obſcure, or perhaps did not exiſt, I at laſt ventured to conclude, that this ſpecies of illneſs had more affinity with the diſorder uſually known by the name of yellow fever, than with the common remitting endemic of the country. I ſhall therefore deſcribe it as a ſpecies of that diſeaſe; though I am leſs ſolicitous about fixing its place in noſological arrangement, than of giving a hiſtory of it, by which it may be eaſily recognized.

I am not ignorant that there are ſeveral authours, who have written on the ſubject of the yellow fever; yet I had not the opportunity of conſulting any of them, except Dr. Hillary,

Hillary, during the time that I lived in Jamaica. This writer's method of cure was adopted very generally by the medical people of the iſland; and many of them were diſpoſed to think favourably of its ſucceſs. I cannot however conceal, that I was diſappointed in every inſtance where I ſaw it employed. If, in any caſe, the patient recovered, this fortunate event appeared to be more owing to great natural ſtrength of conſtitution, or to a lower degree of diſeaſe, than to the efficacy of the method of treatment. But beſides, that this authour's method of cure is feeble and ineffectual, the hiſtorical part is particularly defective; the diſeaſe, in ſhort, being only very imperfectly diſcriminated from the common endemic of that country. The conſideration of theſe circumſtances, induced me to throw together the obſervations which I had made on this ſubject, during the time that I reſided in the Weſt-Indies; and though I am conſcious that they are imperfect, I ſtill hope that they contain ſome hints which may be uſeful to thoſe, who have had little experience of the fevers of hot climates.

In our enquiries into the hiſtory of the yellow fever, ſome circumſtances preſent themſelves to our obſervation, which are not a little curious. It has never been obſerved, that

that a negroe, immediately from the coaſt c Africa, has been attacked with this diſeaſe neither have Creoles, who have lived con ſtantly in their native country, ever bee known to ſuffer from it: yet Creoles or Afri cans, who have travelled to Europe, or th higher latitudes of America, are not by an means exempted from it, when they retur to the iſlands of the Weſt-Indies. Euro peans, males particularly, ſuffer from it ſoo after their arrival in the tropical countries yet, after the natives of Europe have remaine for a year or two in thoſe hot climates, eſpe cially after they have experienced the ordinar endemic of the country, the appearance c the yellow fever is obſerved to be only a rar occurrence. But beſides, that this diſeas ſeldom diſcovers itſelf among thoſe peopl who have lived any length of time in a tro pical country, it has likewiſe ſcarcely ev been known to attack the ſame perſon twic unleſs accidentally after his return from colder region. The remitting fever, on th contrary, does not ceaſe to attack ſuch have reſided the greateſt part of their life i thoſe climates; or who have lived after th moſt regular and abſtemious manner; a fa which ſeems to prove, that there actually ex iſts ſome eſſential difference between the tw

diſeaſe

s; or which ſhews, at leaſt, that the re-
on of a ſeaſon or two deſtroys in the
ean conſtitution, a certain aptitude or
ition for the one diſeaſe, which it ſtill
s for the other.

ving thus premiſed ſome circumſtances,
a regard the general nature of the yel-
ever, I ſhall proceed to give a more par-
r deſcription of the diſeaſe, previouſly
ng it into three forms, in each of which,
eve, I have frequently ſeen it appear.
ito a ſpecies of diſeaſe, in which ſigns
utrefaction are evident at a very early
, which is generally rapid in its courſe,
hich uſually terminates in black vomit-

Yellowneſs ſeldom or never fails to
: its appearance in the preſent inſtance;
erhaps it is only this form, which, ſtrictly
king, can be called the yellow fever.
nto a form of fever, which either has no
ſſions, or remiſſions which are ſcarcely
eptible; in which ſigns of nervous af-
on are more obvious than ſymptoms of
eſcency; and in which yellowneſs and
k vomiting are rare occurrences. 3. Into
her form, in which regular paroxyſms
remiſſions cannot be traced; but in which
e are marks of violent irritation, and ap-
ances of inflammatory diatheſis in the
earlier

earlier ſtage, which give way after a ſhort continuance to ſigns of debility and putreſcency, to which yellowneſs frequently ſucceeds, or even ſometimes the ſo much dreaded vomiting of matter of a dark colour.--The diſeaſe, which I have divided in the above manner into three diſtinct forms, appears to be in reality only one and the ſame. The difference of the ſymptoms probably ariſes from very trivial or very accidental cauſes; and it is a matter of great difficulty to diſcriminate thoſe ſigns, which are eſſential and neceſſary to its exiſtence. It is in ſome degree peculiar to ſtrangers from colder regions, ſoon after their arrival in the Weſt-Indies, and may generally be diſtinguiſhed from the remitting endemic of the country, not only by the obſcureneſs, or total want of paroxyſms and remiſſions, but likewiſe by a certain expreſſion of the eye and countenance, with ſomething unuſually diſagreeable in the feelings, of which words convey only an imperfect idea.

SECTION I.

I SHALL deſcribe, in the firſt place, the moſt common and moſt formidable ſpecies of

of this diſeaſe, which, as I obſerved before, is diſtinguiſhed by early ſigns of putreſcency, by an intenſe degree of yellowneſs; and, towards its termination, uſually by vomiting of matter of a dark colour. It was mentioned in the preceding treatiſe, concerning the remitting fever of Jamaica, that fevers of different types had their different hours of invaſion; but no ſuch property was obſerved in the preſent diſeaſe. In ſome inſtances the yellow fever began in the morning, though the evening, upon the whole, was the more uſual time of its attack. The firſt ſymptoms were languor, debility and head-ach, together with an affection of the ſtomach peculiarly diſagreeable. This laſt often preceded the others, and was in ſome meaſure characteriſtic; but it is impoſſible to give a clear idea of it in words:--anxiety, nauſea, and certain unuſual feelings were ſo ſtrangely combined, that any deſcription, which I might attempt to give of this complicated ſenſation, would hardly be intelligible. The horror and ſhivering, which ſo uſually precede fevers, was ſeldom great in degree in the preſent inſtance; but it ſometimes continued long, and was often accompanied with ſenſations of a very unpleaſant kind. The heat of the body, though rarely intenſe, was frequently

quently of an acrid and pungent nature. The pulſe was weak and confined in its ſtroke. It was likewiſe frequent, and the nature of the arterial pulſations were creeping or vermicular; in ſhort, there was a perpetual motion under the finger, combined with ſomething, which gave the idea, that the diſeaſe was not of the kind which has paroxyſms and remiſſions. Together with this, the eye was ſad and watery; or in ſome degree inflamed, having much that appearance, which is the conſequence of expoſure to the ſmoke of green wood. The face was often fluſhed; yet the fluſhing, in the preſent caſe, was different from that which ariſes from ordinary cauſes. There was a degree of confuſion, and often a degree of grimneſs joined with it, difficult to be deſcribed in words; but which a perſon, acquainted with the appearances of the diſeaſe, immediately recognizes as a diſtinguiſhing mark of its character. The tongue was often moiſt, and generally foul; the thirſt was ſeldom great, and though there was uſually a peculiar nauſea, there was rarely any ſevere vomiting or retching. The breathing was hurried, for the moſt part, with much anxiety and diſtreſs; while the patient frequently expreſſed ſufferings, which a perſon, unacquainted

inted with the nature of the diſeaſe, would liſpoſed to believe were not real.

The ſymptoms, which I have enumerated ve, are thoſe which uſually ſhew themes in the firſt twelve hours of the diſeaſe. arked them with all the attention of which as capable; yet ſtill I am fearful, that the ory may not be ſo explicit as to be totally from ambiguity. The characteriſtic ks of the yellow fever, are not by any ns doubtful to a perſon well acquainted h the diſeaſes of hot climates; but they not eaſily conveyed in words, and may n be overlooked by thoſe, who have drawn ir information from books alone. I am uced to think ſo, from an inſtance which pened to myſelf. I had read Hillary's acnt of the yellow fever, both before and n after my arrival in Jamaica; I had likee heard ſome converſation on the ſubject, hat I might be ſuppoſed to have been tobly well informed of the general charac- of the diſeaſe; yet the firſt perſon, who e under my care in this illneſs, was within w hours of death before I knew the diſer, or even ſuſpected it to be of a dange- s nature. Fortunately for the peace of conſcience, the patient had been viſited, both the firſt and ſecond day after the attack,

tack, by a practitioner who had lived many years in the iſland; but, between careleſſneſs and inexperience, the poor man's ſituation was either not known, or not attended to, till approaches of death were viſible. The body had been evacuated very plentifully by a ſolution of ſalts, during the two firſt days of the illneſs; but no material good ſeemed to enſue from it. The patient complained ſtill more on the ſecond day, than he had done on the firſt; but as the external ſigns of fever were moderate, I really ſuſpected that he complained without much cauſe. It ſo happened, that I could not viſit him on the third; and on the morning of the fourth, he became of a deep orange colour, and vomited black matter in great quantity. I then ſuſpected, that this complaint, to which I had not paid particular attention, was actually the diſeaſe known by the name of yellow fever; but it appeared likewiſe, to be ſo far advanced in its progreſs, that I could do nothing more than witneſs the approach of death. My want of diſcernment, and in ſome degree my careleſſneſs, a charge from which I cannot altogether acquit myſelf, made ſo deep an impreſſion on my mind, that I turned over every circumſtance of the diſeaſe with which my memory ſupplied me; and I ſoon had that ſatisfaction

tisfaction to find, that the miſtake which I had committed, had not happened to me without leaving an uſeful leſſon. In ten or twelve days another perſon was affected in a manner ſo ſimilar to the former, that I ſuſpected the diſeaſe to be the ſame, and the event proved my ſuſpicions to have been well founded. From that time forward, I never found difficulty in diſtinguiſhing this particular form of fever, in the firſt hours of its attack, not only from the remitting endemic of the country, but even from the other two ſpecies of this diſeaſe, which I ſhall afterwards deſcribe.

A trifling abatement of the ſymptoms, was ſometimes taken notice of, in ten or twelve hours after the commencement of this diſeaſe; but in no inſtance, ſo far as I have obſerved, was there ever ſo much alleviation, as with any juſtice could be called a remiſſion. The ſymptoms of diſtreſs, where any abatement had been perceptible, recurred in a ſhort time with aggravation; and if there actually ever was any relief afterwards, it was only momentary and uncertain. The appearance of the eye became ſtill more deſponding, with a ſenſation of burning heat, and greater marks of inflammation, affording inconteſtible ſigns of the real genius and nature of the fever. The

pain of the head was now violent; the countenance was confuſed and grim: the gums were frequently ſpongy, and diſpoſed to bleed; the tongue, which was ſometimes moiſt, ſometimes dry, was almoſt always foul; the thirſt was irregular; at one time intenſe, at another very little increaſed beyond what it naturally is. Nauſea, I obſerved above, was a common ſign, from the firſt hours of the illneſs; yet vomiting, during the firſt day or two, was not by any means a conſtant, perhaps ſcarcely a frequent ſymptom: neither, if it did take place, was it often found to be bilious. The liquor thrown up, for the moſt part, was clear; in ſhort, ſeldom altered from the ſtate in which it had been drank, unleſs by having acquired an unuſual degree of ropineſs, or by preſenting ſome flakes of a darker coloured mucus. To the above ſymptoms we might add, uncommon reſtleſſneſs and anxiety; a torment ſcarcely to be expreſſed in words; watchfulneſs; a hurried and difficult reſpiration; frequent deep and heavy ſighing, with more or leſs diſpoſition to faint, where any exertion was attempted. It deſerves to be remarked, however, with regard to the diſpoſition to faint in the yellow fever, that it did not depend upon the ſame cauſe, as in ſome other diſeaſes. It ſeemed, in fact,

to

to be owing to torpor of the nervous power, rather than to exceſs of mobility. The patient was often able to ſtand upright, for ſome time, even to walk to a conſiderable diſtance; and when at laſt overcome, was obſerved to fall down in a torpid, rather than in a fainting ſtate. Sweating was a rare occurrence in this ſtage of the diſeaſe; at leaſt I do not find, that I ever had remarked any greater degree of it, than a clammy moiſture on the head and neck. It was alſo rarely obſerved, that the external heat was much increaſed beyond its natural ſtate; while the pulſe now began gradually to abate in point of frequency. The yellowneſs, which is intenſe in the laſt ſtage of the diſeaſe, was ſeldom ſeen in the period which I now deſcribe; yet, together with a general obfuſcation of countenance, a tawney hue, rather than a paleneſs, was obſerved about the eyes and corners of the mouth, when the patient turned accidentally languid and faint. The body was frequently coſtive in the firſt days of the illneſs; and I have even ſeen ſome inſtances where ſtrong cathartics did not occaſion the uſual evacuations. The urine was generally high coloured, and turbid. In ſome caſes, there was active hœmorrhage from the noſe; which was generally followed with ſome relief from the violent

pain of the head. I have alſo obſerved a high degree of delirium, though I never ſaw any inſtances, where this ſymptom was of long continuance.

The duration of the tumultuary ſtate, which I have deſcribed, is uncertain. Sometimes it did not exceed twenty-four hours, though it more generally continued till the third day; ſometimes even longer. The ſymptoms, which now made their appearance, were many of them different in their nature from the former. The agony of diſtreſs, which was ſo ſtrongly depicted in the countenance of the patient, during the firſt days of the diſeaſe, was obſerved about this time to be ſenſibly diminiſhed; the eye became more chearful, the countenance more ſerene and compoſed; yet yellowneſs of the ſkin became ſpeedily evident: the external heat and fever ſubſided; the pulſe became gradually fuller and ſlower, and approached by degrees to its natural ſtate: no ſweat or moiſture was now obſervable on any part of the body; the ſtate of the ſkin impreſſed the idea, as if it were not pervious to any degree of perſpiration, and heat gradually forſook the ſurface and extremities; the tongue turned moiſt, and at the ſame time frequently clean about the edges: the gums turned redder, more ſpongy, and ſhewed a greater

greater diſpoſition to bleed: vomiting was now troubleſome:--the liquor thrown up was ropy, much in quantity, and abounding with villous or mucus flakes of a darker colour: thirſt, in a great meaſure vaniſhed; but ſenſations of anxiety, diſtreſs and uneaſineſs in the region of the ſtomach ſuffered no material abatement.

Things went on in this manner, ſometimes for one day only, ſometimes for two, three or more. The circulation in the extreme veſſels became gradually more languid; the natural heat retired from the ſurface of the body, which was now dry and impervious; the pulſe returned nearly to its ordinary ſtate, or became ſlow, full, and regular; the yellowneſs increaſed faſt; ſo that the whole of the body was frequently yellow as an orange, or of as deep a colour as the ſkin of an American ſavage; anxiety was inexpreſſible; vomiting was irreſtrainable, and the ſo much dreaded ſymptom of vomiting of a matter reſembling the grounds of coffee, at laſt made its appearance. It deſerves, however, to be remarked, with regard to this formidable ſymptom, that the colour of what was thrown up, was often black as ſoot, where the diſeaſe had hurried on rapidly to the laſt ſtage; while it was not only leſs intenſely black, but was often

tinged with green, where the progreſs had been ſlow and gradual. I obſerved before, that villous or mucus flakes were diſcovered early in the vomitings of the patient, and that theſe appearances increaſed as the diſeaſe advanced in its progreſs. I may now add, that ſtreaks of blood were ſometimes found to be joined with them; the greateſt part of which ſeemed to come from the throat and gums. The vomiting, which now returned at ſhorter intervals as the diſeaſe approached this fatal period, was ſeldom accompanied with violent retching. A quantity of liquor, ſometimes a quantity ſo enormous, that we could not help wondering whence it had been ſupplied, having been collected in the ſtomach, was diſcharged without much difficulty, and the patient enjoyed ſome reſpite till a like accumulation had again taken place. It may further be remarked, that as ſoon as the vomited liquor acquired this dark and ſooty colour, the belly generally turned looſe, the ſtools being black and ſmooth, not unlike tar or molaſſes. The tongue likewiſe became clean, the gums became putrid; hœmorrhage, or rather oozings of blood were ſometimes obſerved at different parts of the body; while livid blotches frequently made their appearance on the belly and inſides of the thighs. The pulſe, which during the latter ſtages of the diſeaſe, could ſcarcely

ſcarcely be diſtinguiſhed from the pulſe of a perſon in health, became at laſt quick, irregular, or intermitting; ſoon after which, coma or convulſions cloſed the ſcene. It may not be improper to remark, before leaving the ſubject, that the yellowneſs of the ſkin, which was ſaid to precede the black vomiting in moſt inſtances, in ſome caſes was found to ſucceed to it. In ſuch, the vomiting began unexpectedly, or without much previous affection of the ſtomach; the colour of it was uſually intenſely black, the patient turned yellow almoſt in an inſtant, and died in a very ſhort ſpace of time:--the diſeaſe, in ſhort, paſſed ſuddenly from the firſt ſtage to the laſt.

I may obſerve in this place, that the number of thoſe who recovered from the laſt ſtage of this ſpecies of the yellow fever, was extremely ſmall; yet, though ſuch fortunate inſtances were rare, they were not altogether wanting. The termination, however, did not appear to be by regular criſis. The black vomiting ceaſed, ſometimes apparently in conſequence of treatment, ſometimes evidently of its own accord; but a vomiting of a ropy, glutinous matter continued for a great length of time, together with an extreme irritability of ſtomach, and a very peculiar ſtate of the ſkin; which ſometimes did not recover its natural

ſmoothneſs and unctuoſity, till after ſeveral weeks had elapſed.

During the time that I lived in Jamaica, I opened ſeveral perſons who died of this diſeaſe; but it was ſeldom that I found any material variation in the appearances. Soon after death, and even ſometimes before death had actually taken place, the body became covered with large livid blotches; and, it is almoſt unneceſſary to mention, was extremely offenſive. In opening the abdomen, the omentum and all its appendages were diſcovered to be in a dry and parched ſtate, and of an uncommon dark grey colour. But together with this dark grey colour of the omentum, and a want of the unctuoſity or moiſture, which is uſually found in the cavity of the abdomen, the ſtomach and inteſtines had a dirty yellow appearance, were highly putrified, and much diſtended with wind. The liver and ſpleen were generally enlarged in ſize; the colour of the liver was often of a deeper yellow, than that of any other of the abdominal viſcera; while the texture of the ſpleen was frequently leſs firm, than it is found to be in its natural ſtate. The gall-bladder, for the moſt part, was moderately full; but the bile it contained, was black and thick, not unlike tar or molaſſes. The biliary ducts

ducts were likewiſe enlarged, and moderately filled with the ſame ſort of bile, which was found in the gall-bladder; while the very blood veſſels of the liver bore the marks of uncommon diſtenſion. In the cavity of the ſtomach likewiſe, there was uſually more or leſs of a dark coloured liquor, ſimilar to what had been thrown up in the laſt ſtage of the illneſs. But beſides, that this dirty fluid was generally preſent in the ſtomach in conſiderable quantity, the villous or inner coat of that organ was alſo abraded in various places; at the ſame time that ſome ſpots appeared on the ſurface, which were probably the beginnings of mortifications. The ſuperior portions of the inteſtinal canal were generally in a ſituation ſimilar to what I have deſcribed; only it muſt be remembered, that the morbid appearances were not yet ſo far advanced in progreſs.

The ſtate of the body, as it appeared on diſſection, throws conſiderable light on the nature of the yellow fever. It enables us to explain ſatisfactorily many of its leading ſymptoms; and may even afford uſeful hints in the conduct of the cure. It was mentioned above, that the natural heat and vigour of circulation retired from the ſurface and extremities of the body at a certain period of the

the diſeaſe; and that a copious and obſtinate vomiting enſued ſoon after this change had taken place. The fluid thrown up, which was uſually pituitous, glutinous, or flakey in the beginning, acquired, after ſome time, a colour of various degrees of blackneſs. In quantity, it was often immoderate, bearing no proportion to the liquor which was drank; a circumſtance which could only be explained by the ordinary determination to the ſurface of the body being turned upon the internal parts; in conſequence of which, there was a preternatural diſcharge of fluid into the cavity of the alimentary canal. Flakes, of a mucus or villous nature, were likewiſe frequently obſerved in thoſe matters which were thrown up by the patient; an appearance which we could not have eaſily accounted for; unleſs we had diſcovered, in examining the dead body, that the inner coat of the ſtomach was actually abraded; but in what manner this happened, may be difficult to explain. It might either ariſe from the repeated action of ſevere vomiting; or, ſtill more probably, from the preternatural and forcible determination to the exhaling veſſels of this cavity, forcing off ſome portions of the villous coat, in the manner of cuticular bliſters. To which explanations I may add, that the black colour of the vomited

vomited matter, was evidently owing to a mixture of vitiated bile; the paſſage of which might be eaſily traced from the gall duct into the pylorus.(b)

The ſpecies of the yellow fever, which I have now deſcribed, is univerſally acknowledged to be a terrible diſeaſe; and there are few, I believe, ſo uncandid, as to boaſt of general ſucceſs in the manner of curing it. A road is therefore left open, not only for improvement, but almoſt for total innovation. The only authour I have read on the ſubject, or the practitioners with whom I am acquainted, do not ſeem to have extended their views beyond the ſymptoms of the diſeaſe. There are ſome, who, from obſerving that there is pain of the head and fluſhing of the face, recommend bleeding; others, from the preſence of nauſea or inclination to vomit, make trial of emetics; and many, from various cauſes, inſiſt on the indiſpenſible uſe of cathartics. My views, I muſt confeſs, are different from thoſe of preceding authours. Bleeding was employed occaſionally; emetics were cautiouſly avoided; but time appeared to be too precious to be ſpent in attending to the effects of cathartics, which cannot often be known in leſs than twenty-four hours; and which at beſt are precarious

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or feeble. Inſtead, therefore, of attem
to evacuate redundant bile, or to corr
when ſuppoſed to be vitiated, I exerted
ſelf, from the firſt moment that I was
to the patient, to change the genius an
tural tendency of the diſeaſe; or, if I m
allowed the expreſſion, to take the buſin
ſpeedily as poſſible, totally out of the
of nature.

I remark in the firſt place, that I gen
began the cure of this ſpecies of the y
fever with bleeding. Bleeding was emp
in the preſent caſe, chiefly with a vi
paving the way to remedies of greater eff
It was, however, found to moderate th
lence of local pain, particularly the vio
of the head-ach, and to be not altog
without effect, in retarding the uſual
progreſs of the diſeaſe. It has hitherto
thought neceſſary, indeed almoſt indiſ
ble, to empty the firſt paſſages in this ſ
of fever; but time is ſhort, and the
which accrues from ſuch evacuations,
very certain, and often not eſſential. It
therefore, thought ſufficient to truſt th
tention, for the moſt part, to laxative gly
after the employment of which, (bl
having been premiſed in ſuch quantity a
deemed proper,) the patient was waſhed

and bathed in warm water, in as complete a manner as the circumſtances of ſituation would permit. It is needleſs to mention, that this was done with a view to increaſe mobility of ſyſtem, and to remove ſpaſmodic ſtricture from the extreme veſſels of the ſurface; in conſequence of which, greater benefit was expected from the application of cold ſalt-water, which was daſhed ſuddenly from a bucket on the head and ſhoulders. This practice may appear hazardous, to thoſe who argue without experience; but I can vouch for its general ſafety, and bear teſtimony to its good effects. Sweat, with perfect relief from all the feelings of anxiety and diſtreſs, was generally the conſequence of this mode of treatment. If employed within the firſt twelve hours from the attack, it ſeldom failed of removing all the ſymptoms of danger; or of effecting a total and complete change in the nature and circumſtances of the diſeaſe; but if the progreſs was more advanced, though the ſame rule of practice might ſtill be proper, the execution required more boldneſs and deciſion. It is only poſſible to judge from the circumſtances of the caſe, at this period, of the neceſſity or propriety of bleeding, and of emptying the lower inteſtines by means of glyſters; but when this buſineſs ſhall have been

been accompliſhed, in ſuch manner as may be deemed right, or conducive to the main view, it will be adviſeable to ſhave the head, to bathe the whole body in warm water, and inſtantly to daſh cold water from a bucket on the head and ſhoulders. I have even ſometimes, where there was an appearance of greater obſtinacy, ventured to wrap the whole body in a blanket ſoaked in ſea water, or water in which was diſſolved a large portion of ſalt. If anxiety was great, or nauſea and vomiting troubleſome, I have alſo obſerved benefit from the application of a bliſter to the epigaſtric region. Opiates, joined with remedies which had a tendency to determine to the ſurface, were found to be ſerviceable; and wine, with a ſupply of freſh and cool air, in moſt caſes, was highly neceſſary. This method of proceeding will, perhaps, be thought unwarrantable; but I can ſpeak confidently of its ſafety; and I may farther add, that unleſs ſome decided ſteps are taken to change the nature of the diſeaſe, during the continuance of this ſtage, our future endeavours to do good, will generally be in vain. I have hitherto promiſed ſucceſs in the cure of this fever, with a good deal of confidence; but if it ſhould ſo happen, that we are not called to the patient till the yellowneſs has ſpread over

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the whole of the body, or till the black vomiting has begun to make its appearance, the proſpect, I muſt confeſs, is then very dark. The ordinary reſources of our art are feeble; and if good can be done at all, it can only be done by means, which in the common opinion of practitioners, border on raſhneſs. In this latter ſtage of the complaint, ſo great a degree of torpor overwhelms the powers of life, that remedies do not produce their uſual effects; and our labour is often the ſame, as if we attempted to reſuſcitate a corpſe. I have, however, ſeen inſtances of ſuch unexpected recoveries from the moſt hopeleſs ſtate in fevers, that I ſeldom totally deſpair as long as life remains. I know that death may be prevented, even after black vomiting has appeared with all its terrors, if a remedy can be found powerful enough to excite the action of the extreme veſſels, and to recall the determination to the ſurface of the body. For this purpoſe, I have employed alternately warm and cold bathing with ſucceſs. I have even wrapt the body, as I mentioned before, in a blanket, ſoaked in water, in which a large portion of ſalt was diſſolved, or which had been ſteeped in brandy or rum, enjoining at the ſame time the liberal uſe of wine, or even more powerful cordials. I have heard of ſome

ſome well-atteſted inſtances, where plentiful draughts of rum and water, have checked the vomiting, and apparently ſaved the lives of patients, after the medical people had given them up for loſt.

I have now mentioned the method of cure which I purſued in the yellow fever of Jamaica; and I muſt be allowed to add, that the general indication appears to be confirmed by a view of the hiſtory and progreſs of the diſeaſe, as alſo by conſidering the appearances which are found after death. It was obſerved in the preceding pages, that the circulation became languid at a certain period in the courſe of this fever, and that the determination was, in fact, turned upon the internal parts, particularly upon the alimentary canal, and biliary ſyſtem. To ſupport, therefore, or to recall the determination to the ſurface, where it had began to retire, was the principal aim which was kept in view. It was purſued with vigour; and, I have the ſatisfaction to add, frequently with ſucceſs. I am afraid that the means may be thought hazardous; but I have never yet perceived from them, even a momentary harm. I ſhall not therefore ceaſe to recommend them, till I find that others have tried them fairly, and found them dangerous or ineffectual.

SECTION

SECTION II.

IN the preceding pages, I attempted to deſcribe the diſeaſe, which has been uſually regarded as the proper yellow fever of the Weſt-Indies, detailing at the ſame time, the particular ſteps of a method of cure, which I have cauſe to believe, was followed with more than ordinary ſucceſs. I now proceed to conſider another ſpecies of diſorder, which frequently makes its appearance among people newly arrived in hot countries; and which, from ſome ſtriking marks of affinity, I have been induced to rank as a ſpecies, or variety of the former. Yellowneſs, indeed, is not by any means common to it, and black vomiting is actually rare; yet paroxyſms and remiſſions are ſcarcely diſtinguiſhable, and the difference between it and the preceding, is perhaps, in fact, only accidental.

I remarked before, that this ſpecies of diſeaſe, as well as the yellow fever, properly ſo called, appears but rarely among thoſe who have reſided any length of time in tropical climates. It was obſerved to begin, as fevers uſually do, with diſagreeable affection of the

ſtomach, with languor, debility and pain of the head. The horror or ſhivering, ſo common in the commencement of febrile diſeaſes, was ſeldom great in degree; but it often laſted long, and ſometimes was accompanied with unuſual feelings. The pulſe was generally ſmall, frequent, and eaſily compreſſed; the eyes were watery, muddy, or inflamed; the features were confuſed, and the countenance was ſometimes fluſhed: the thirſt was ſeldom great; and the heat of the ſkin was uſually moderate; but a deep and heavy ſighing, a hurried reſpiration, with an inconceiveable diſtreſs and anxiety about the præcordia, gave ſtrong indications of the nature of the complaint.--In ſome inſtances I have known ſuch ſevere and excruciating ſpaſms, as, in ſome meaſure, ſeemed to ſuſpend the ordinary functions of life.

In twelve hours, or leſs, there was often ſome abatement in the violence of thoſe ſymptoms; but ſeldom ſuch material relief, as, with any degree of juſtice, could be called a remiſſion. The ſkin became cool, and ſometimes moiſt; yet there ſcarcely ever was any ſweat. The pulſe became fuller, and often leſs frequent; the reſtleſſneſs and anxiety were ſometimes ſenſibly diminiſhed; and the local pain often abated: but this reſpite was neither long,

long, nor of certain duration. In a few hours, all the ſymptoms returned with aggravation. The eyes became more muddy; the countenance more confuſed; the head-ach, and other pains increaſed, together with ſenſations of anxiety, and reſtleſſneſs, hurried reſpiration, and deep and heavy ſighing. The pulſe was now more frequent, ſmaller and harder; the thirſt was increaſed, with nauſea, and ſometimes with vomiting. The vomiting was ſeldom bilious: it was not often, indeed, that the matter thrown up, was altered from what had been drank, unleſs by having acquired an additional degree of ropineſs.--To the above ſymptoms was ſometimes added an obſtinate coſtiveneſs, ſometimes ſuch a degree of purging and griping, as might eaſily be miſtaken for proper dyſentery.

As the diſeaſe advanced in its progreſs, the abatement of the violence of ſymptoms, which at firſt was ſometimes perceived towards the mornings, became gradually leſs and leſs perceptible, and at laſt was ſcarcely to be diſtinguiſhed. The anxiety and reſtleſſneſs were now particularly diſtreſſing; the ſkin was ſometimes dry, though oftener moiſt, and in point of heat below the ordinary temperature of health; while it gave the idea to the perſon who felt it, as if there was a powerful ſpaſm

ſubſiſting on the ſurface. I may likewiſe remark in this place, that a beautiful red colour of the cheeks, together with a ſmoothneſs and cherry plumpneſs of the lips, was frequently obſerved towards the latter periods of the diſeaſe. Yellowneſs, as was mentioned before, was ſeldom ſeen, unleſs in the very laſt ſtage of the illneſs; and vomiting of black, or even bilious matter was extremely rare. There was, however, at all times, a great diſpoſition to faint, with more or leſs of a certain ſpecies of low delirium.

The courſe of this ſpecies of the diſeaſe, was leſs rapid, than the courſe of that which terminates in black vomiting; the termination of the one being often protracted to the eighth or ninth day, that of the other ſeldom exceeding the fourth or fifth. The marks of criſis, as was obſerved before, were rarely diſcoverable in the firſt ſpecies of the yellow fever. They were likewiſe obſcure in the preſent, and I cannot pretend to ſpeak with confidence, of the influence of critical days. Where the termination was favourable, the pulſe became gradually ſtronger, and leſs confined in its ſtroke; the ſkin likewiſe became ſofter, while the impreſſion, which it made on the hand that felt it, communicated an idea that the circulation was more vigorous,

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and the ſpaſm on the ſurface leſs obſtinate; the eye and countenance likewiſe brightened up; the anxiety and reſtleſſneſs vaniſhed or decreaſed, and ſome appetite for food returned; but it was often difficult to mark the point of time preciſely, at which this change took place.---It may be obſerved likewiſe, where the termination was fatal, that death approached in two different ways. A patient, apparently poſſeſſed of vigour, was ſometimes ſuddenly ſeized with coma or convulſions, and died unexpectedly; but it happened more frequently, that the powers of life were gradually and ſlowly extinguiſhed; the pulſe became weaker and more confined in its ſtroke; while the natural heat and circulation retired by degrees from the ſurface and extremities of the body.

The cure of this ſpecies of the diſeaſe, though by no means eaſy, was leſs difficult upon the whole than that of the former. Inſtead of the torpor and inſenſibility, which prevailed in the latter periods of the proper yellow fever, the mobility of the nervous ſyſtem was ſo much increaſed in the preſent ſpecies of diſeaſe, that remedies ſeldom failed of producing ſenſible effects; and wherever remedies produce effects, it generally is in our power to manage the buſineſs in ſuch manner,

that ſome good may ariſe. It may be obſerved in the firſt place, with regard to the cure, that bleeding, which frequently was uſeful in the former ſpecies, was generally hurtful in the preſent; and that inſtead of retarding, it oftener accelerated the progreſs of the diſeaſe. Emetics were employed very commonly by the practitioners of the Weſt-Indies, in this as in other caſes of fever; but I cannot help remarking, that languor and debility, frequently yellowneſs, and ſometimes a continual vomiting, which no remedies could reſtrain, were often the conſequence of antimonial emetics of ſevere operation; and I have no doubt in ſaying, that the approach of death was actually haſtened, in ſeveral inſtances, by this method of treatment. Laxatives were occaſionally of ſervice; but the ſtronger purgatives were frequently hurtful. Bliſters were often extremely beneficial; but it requires care and diſcernment to apply them in the proper circumſtances, ſo as to reap the full advantage. Opiates were ſometimes ſerviceable, and bark and wine, in moſt inſtances, were remedies of great value; but the principal truſt was placed in warm and cold bathing; which, under proper management, ſeldom failed of anſwering every expectation completely, or ſpeedily, of removing the chief

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ſymptoms of danger.--Sometimes it appeared to cut ſhort the courſe of the diſeaſe abruptly.

SECTION III.

I HAVE now deſcribed two ſpecies of a fever, which ſeems to be, in ſome degree, peculiar to the natives of northern regions, ſoon after their arrival in the Weſt-Indies. In the one, a determination to the alimentary canal and biliary organs, with marks of putreſcent tendency in the general maſs of fluids, was diſcoverable at an early period; in the other, the brain and nervous ſyſtem were more particularly and principally affected; while the ſpecies, of which I now attempt to give ſome account, exhibited ſtrong marks of vaſcular excitement, with a very high degree of the apparent inflammatory diatheſis. This was more irregular in its appearances, and more complicated in its nature, than the others. The marks of inflammatory diatheſis were generally very apparent in the beginning; but they uſually gave way or became complicated in the latter ſtages, with ſymptoms of putreſcency or nervous affection. In deſcribing the hiſtory of this diſeaſe, it may not be ſu-

perfluous to remark, that there is ſeldom any thing particular in the ſenſations of debility and horror, which precede the formation of the paroxyſm. The hot fit was generally obſerved to run high; the heat was often intenſe; the pulſe, which was quick, frequent and irregular, vibrated often in an uncommon manner, and with an uſual degree of force; the thirſt was ſometimes immoderate, ſometimes not greatly increaſed; the countenance was fluſhed; the eye gliſtened, and appeared frequently to be in ſome degree inflamed; the ſigns of excitement were in general uncommonly high; yet the diſpoſition to faint was ſometimes ſudden and unexpected. It deſerves farther to be remarked, that blood drawn from the arm did not commonly exhibit the uſual buffy appearance of real inflammatory diatheſis; and though times of aggravation and alleviation were often diſcernable; yet they did not happen at regular and ſtated periods.

It was obſerved frequently, that many of the leading circumſtances ſuffered a material change, about the third day of the diſeaſe. The ſymptoms of high inflammatory diatheſis, which prevailed in the beginning, became mixed, more or leſs, with ſymptoms of putreſcency, or nervous affection. Delirium made

made its appearance; ſometimes it ran high, with ſtartings and ſymptoms of violent excitement; ſometimes there was a low and muttering incoherence, with marks of languor and debility. The gums turned red and ſpungy, and ſometimes bled; the thirſt was frequently intenſe, the tongue dry, with vomiting and ſevere retching; yet vomiting of bilious or vitiated matters was a rare occurrence. The above ſymptoms generally went on to increaſe, during the ſpace of ſix or ſeven days, about which period the powers of life either yielded to the diſeaſe, or ſigns of recovery began to appear: the marks of criſis, however, were ſeldom diſtinct and final; neither was the influence of critical days ſo much to be depended upon as in the common remitting fever of the country.

It was mentioned above, that the nature of this fever was more complicated than that of the two former; ſo the indications of cure are likewiſe more difficult and perplexed. If we proceed on the firſt obvious view of the diſeaſe, we ſhall often do irreparable miſchief by copious and repeated evacuations; yet there will not be leſs danger, on the other hand, if, regardleſs of the preſent degree of excitement, we indulge freely in the uſe of ſtimulants. It is neceſſary to obſerve a middle courſe; and I muſt

muſt confeſs, that it is ſometimes difficult to do any thing, without doing harm. Bleeding was frequently employed in the cure of this diſeaſe; and in moſt caſes, it was a uſeful remedy, though leſs perhaps from its own effects merely, than from paving the way to other more powerful applications. It is, however, capable of being eaſily carried to exceſs; and ought not to be truſted to wholly for the removing of the irritability, and high degree of excitement, which prevails ſo generally in the beginning of this diſeaſe. After bleeding, emetics and cathartics are employed very freely. I have always profeſſed myſelf an enemy to the practice of giving emetics in the fevers of Jamaica; yet, I muſt confeſs, that antimonials were not only ſafer, but of more particular ſervice in this, than in any other ſpecies of fever, where I have ſeen them tried. Among the great variety of forms which have been recommended by practitioners, for the purpoſe of emptying the firſt paſſages, I have not found any one anſwer ſo well, as a thin ſolution of the ſal-catharticum, given at different intervals, with a ſmall portion of emetic tartar, and ſometimes with the addition of laudanum. The operation of this remedy was extenſive. It might be ſo managed, as to promote nauſea or vomiting, ſweat, or moderate

derate evacuations downwards; at the ſame time that it proved very powerfully ſedative. I may likewiſe add, that I have ſometimes found benefit from nitre, camphire and opium, given in pretty large doſes, and accompanied with plentiful dilution. But though theſe remedies were often ſerviceable, and contributed in many caſes to moderate the high degree of irritability; yet the chief dependence of the cure was much better truſted to cold bathing. After the ſurface of the body had been ſufficiently relaxed, by the previous uſe of warm bathing and fomentations, the effects of cold bathing were wonderful. The exceſſive irritability was moderated or removed, and the powers of life were invigorated in a very ſingular manner in conſequence of it.

I have attempted in the preceding pages, to give a ſhort view of a diſeaſe, which has not, I believe, been hitherto very accurately deſcribed by authours, or treated with much ſucceſs in practice. It is a diſeaſe of a continued kind; and, as I ſaid before, in ſome degree peculiar to the natives of northern latitudes, ſoon after their arrival in the tropical climates. I cannot help thinking, that it may be eaſily diſtinguiſhed, even in the firſt hours of its attack, from the intermitting or remitting fever, which is the common endemic

demic of hot countries: but I muſt at the ſame time add, that this diſtinction does not reſide in the preſence or abſence of one individual ſymptom. The ſtate of the pulſe, indeed, conveys information, that the diſeaſe is not of the kind which has paroxyſms and remiſſions: yet this information can only be obtained from a knowledge and actual compariſon of the two diſeaſes:--I do not pretend to deſcribe it in words. The ſtate of the eye and countenance, was likewiſe obſerved to be ſtrongly deſcriptive of the nature of the diſeaſe; as alſo were the deep and heavy ſighing, the hurried reſpiration, the anxiety and reſtleſſneſs, with a certain uncomfortableneſs of ſenſation, which no words can expreſs; but I confeſs myſelf, at the ſame time, perfectly at a loſs to fix on any one ſingle ſymptom, which appearing at an early period, diſcriminated it with certainty from all other fevers. I have deſcribed it under three diſtinct and ſeparate forms; but I muſt alſo add, that they may ſometimes be found to be more complicated with each other, than they appear to be in the above deſcription.

CHAP.

CHAP. XII.

INTERMITTING FEVER OF AMERICA.

HAVING endeavoured in the preceding treatiſe, to give a more accurate hiſtory of the endemic fever of Jamaica, than is met with in books, and, I am diſpoſed to flatter myſelf, having pointed out a more ſucceſsful method of cure than that which has been generally purſued; I ſhall now add a few obſervations on the intermitting fever of America; a diſeaſe, in which my experience has been tolerably extenſive. The frequent occurrence of intermitting fevers in every climate, together with the full and ample manner in which the diſeaſe has been treated of by many learned and ingenious writers, excuſes me from entering into a minute and full diſcuſſion of the ſubject. I ſhall therefore employ only a few pages in attempting to illuſtrate ſome particulars in the hiſtory of the diſeaſe, which have been ſuperficially noticed; or to explain ſome points of treatment, which, though not new, I have ventured to carry farther than is uſual in common practice.

tice. As I had the opportunity of attending to the hiſtory of the intermitting fever in ſeveral of the ſouthern provinces of the continent of North America, I ſhall firſt mention the more conſtant and general courſe of the diſeaſe, and afterwards point out thoſe circumſtances of peculiarity, which ſeemed to ariſe from the difference of climate, or from the influence of the ſeaſon of the year. I ſhall likewiſe occaſionally take notice of the general ſtate of health of the troops who were employed on the ſame expedition, though I muſt alſo add, that I can only pretend to trace the progreſs of the fever with accuracy, in the regiment in which I had the honour to ſerve.

I ſhall attempt, in the firſt place, to give an accurate deſcription of the paroxyſm of an intermitting fever, marking as carefully as I can, the order of ſucceſſion, in which the ſymptoms moſt uſually appear. We are taught, by the deſcriptions of moſt writers, to conſider languor and debility as the firſt feeling or firſt eſſential ſymptom in the paroxyſm of an intermitting fever; but I cannot avoid remarking, that an unuſual affection at ſtomach, a flatulence,--in ſhort, ſomething diſagreeable, which I cannot eaſily define, but which was accompanied in many caſes with head-ach, and ſometimes with drowzineſs,

neſs, preceded every ſenſation of languor or debility in moſt caſes, where my obſervations were made with ſuch care that they could be truſted to. I may alſo farther obſerve, that, as ſoon as this languor or debility began to be perceived, the veins began to ſubſide, the nails turned pale, and at laſt blue; the ſkin of courſe was dry and conſtricted; and there was ſometimes an evident diminution of heat, particularly of the heat of the extremities. To theſe ſymptoms was often added, a diſagreeable kind of yawning, with ſtrong ſenſations of wearineſs, and an irreſiſtable inclination to ſtretch the limbs. A ſenſation of cold was now felt in the back, as if water ran down upon it in ſeparate ſtreams. It ſoon vaniſhed, indeed; but ſuddenly returned again in a more violent degree; in which manner it went on, ceaſing for an inſtant, and then recurring with aggravated violence, till the whole body became at laſt affected with rigor or ſhaking, accompanied, in a more eſpecial manner, with chattering of the teeth. The coldneſs having now arrived at its acme, or higheſt point of intenſity, glowings of heat were perceived in the intervals between the rigors or ſucceſſions. Theſe glowings grew gradually ſtronger, and continuing for a greater length of time, at laſt baniſhed every ſenſation

tion of cold. The heat, which now ſucceeded, was often much above the temperature of health; marks of fever ſometimes ran high; the veins became full; the face was flushed, and the ſurface of the body bore marks of diſtenſion. The duration of this ſtate was uncertain: ſometimes it did not continue the ſpace of one hour, ſometimes it laſted four or five. A dampneſs at firſt began to appear on the forehead and breaſt, which extending itſelf gradually to the extremities, was at laſt formed into a ſweat; in conſequence of which, the fever gradually ſubſided, and the body returned nearly to its natural ſtate.

The above are the moſt uſual ſymptoms of the paroxyſms of an intermitting fever. I have deſcribed them in the order of time in which they moſt uſually appear. I muſt however remark, that ſymptoms are ſometimes obſerved different from thoſe which I have now taken notice of; as alſo, that the order of ſucceſſion, which I have mentioned, is not, by any means fixed and invariable. It is impoſſible to deny the common obſervation, that languor or debility is a general and early ſymptom in almoſt every ſpecies of fever; but it is likewiſe certain, that there are many inſtances, where it is not in our power to perceive its actual preſence. It is therefore precipitate

cipitate to conclude with Dr. Cullen, that all the future phænomena depend upon this, as their eſſential and original cauſe. There may frequently be deception in attempts to deſcribe the ſituation of others; but that which we feel ourſelves is more to be truſted to: and I can affirm, that I have often felt ſenſations of cold in my own perſon, previous to every feeling of languor or debility; previous, I might even ſometimes ſay, to any perceptible deviation from a ſtate of health. But beſides, that the exiſtence or perception of languor and debility, does not ſeem to be eſſential to the exiſtence of a paroxyſm of intermitting fever, I may likewiſe add, that I have ſeen inſtances, particularly in the hot months of ſummer, where the whole of this diſeaſe paſſed over, without the leaſt perceptible degree of a previous cold fit. It happened ſometimes alſo, that, during the continuance of the paroxyſm, there was ſcarcely any obſervable diſorder in the pulſe, or any material ſigns of external fever. The tumult and uneaſineſs, which terminate in moſt caſes by ſweat, went off in ſome by urine or ſtool, or perhaps declined in others, without the appearance of any preternatural evacuation. In like manner it was commonly obſerved, in the diſeaſe diſtinguiſhed by the

name of partial intermittent, that there was not any perception of cold, nor increaſe of heat; no diſorder in the pulſe, or preternatural evacuation; in ſhort, not a ſymptom, which characterizes the genius of the diſeaſe, except local pain, which continuing for a certain time, diſappears, and then returns again at a ſtated hour. To this we may add, that there are various inſtances, where the whole duration of a complaint, which indiſputably depends on the cauſe of intermitting fever, is occupied by a comatoſe diſpoſition, by convulſions, or even by tetanic affection. If we therefore conſider theſe phænomena attentively, we ſhall find little cauſe to believe, that the moſt uſual ſymptoms of the intermitting fever, are ſymptoms without which the diſeaſe cannot exiſt; or that they are mutually the cauſe and effect of each other. The order of ſucceſſion I have obſerved is not fixed invariably; and caſes are numerous, where thoſe ſymptoms, which ſome authors have conſidered as abſolutely eſſential, do not appear at all. This fact is certain; and we may ſafely conclude from it, that the main hinge of action in a paroxyſm of fever has not been yet diſcovered.

The vital and natural functions are variouſly affected, not only in different people, but

but in the ſame perſon, in the different ſtages of a paroxyſm of the ſame fever. The pulſe, in the firſt approach, is often remarked to be ſlower than natural, ſometimes it is more languid and weak. It ſoon however becomes more frequent, though it continues for the moſt part ſmall and contracted, till the latter ſtage of the cold fit. It then uſually acquires ſtrength and ſome degree of fulneſs, ſometimes greater frequency and hardneſs; but as the ſweat begins to flow, the hardneſs and frequency abate, while the fulneſs increaſes; ſo that it returns by degrees nearly to its natural ſtate. The diſagreeable affection of ſtomach, (which I formerly obſerved was ſometimes the firſt perceptible ſymptom of a paroxyſm of the intermitting fever) increaſes frequently to nauſea or retching, ſometimes to ſevere and continual vomiting; which does not ceaſe till ſweating has become general all over the body. The reſpiration, which in the beginning of the paroxyſm, is uſually ſlow, and ſometimes interrupted with ſighing, in the progreſs of the hot fit becomes frequent, laborious and high. It often happens, likewiſe, that there is more than ordinary dullneſs of perception in the mental faculties in the firſt approach of the fever; while this is often ſucceeded by extraordinary acuteneſs in the

more advanced ſtages, particularly during the continuance of the hot fit. But though it is only during this period that excitement and delirium are obſerved to be common; yet inſtances are not wanting, where derangement of intellect is among the firſt ſymptoms of the diſeaſe, and where it continues among the principal throughout the whole of the courſe. To the above appearances we may add, that the urine, which is thin and pale in the firſt ſtage, becomes high coloured in the progreſs of the hot fit; and as the ſweating advances, thick and turbid, frequently with the addition of a copious lateritious ſediment.

I remarked formerly, in treating of the remitting fever of Jamaica, that certain hours of attack were in a very peculiar manner connected with the different types or forms of that diſeaſe; but I cannot pretend to ſay, that the ſame rules were obſerved to hold good, with any degree of certainty in the intermitting fever of America. Single tertians, indeed, began moſt uſually about twelve; tho' there were likewiſe many inſtances where they came on ſo early as ten in the morning, or ſo late as two in the afternoon. The other forms were ſtill leſs regular. It was alſo taken notice of, that anticipations were common in the ſingle tertian of Jamaica; as alſo that they were

were irregular and long. In America they were ſtill more frequent; but ſeldom exceeded one or two hours at once. They often, however, prevailed to a certain acme, or point in the diſeaſe, obſerving a regular interval of time in their progreſs. It ſometimes likewiſe happened, that the type poſtponed gradually, till the complaint diſappeared finally. This, however, was much more rare than the other.

Having mentioned, in the preceding pages, ſome general reſemblances of the intermitting fever of America, I ſhall next trace its peculiarities in the different provinces, in which the regiment to which I belonged, had the fortune to ſerve. I may obſerve in the firſt place, that I joined the firſt battalion of the 71ſt regiment, on York Iſland, in the beginning of the ſummer 1778. Few of the men were then ſick; neither did the number increaſe materially, till towards the latter end of June. The intermittents, which appeared previous to this period, were generally ſingle tertian; and of perfectly eaſy treatment. In the month of July, a dyſentery, of a very particular kind, became epidemic, and the ſporadie intermittent inſtantly vaniſhed. The ſtools in this complaint were numerous, and bloody; the gripings were ſevere, but there

was ſeldom any very material diſorder in the pulſe. The diſeaſe did not often terminate in leſs than ſeven days; ſometimes it continued a fortnight or longer. The ordinary treatment was very rarely of benefit; yet the complaint was of a nature ſo little dangerous, that I do not recollect a ſingle perſon who died of it. It diſappeared totally about the beginning of Auguſt, or rather changed into an epidemic intermittent, the type of which was uſually ſingle tertian. The paroxyſms of this fever were regular, the intermiſſions were diſtinct; and its nature was ſo far from being obſtinate, that I ſcarcely met with an inſtance which reſiſted the Peruvian bark, where that remedy was given in ſufficient quantity. This fever continued highly epidemic during the months of Auguſt and September. The frequency of new attacks was conſiderably diminiſhed in the month of October; yet ſuch as happened then, were generally accompanied with dangerous and alarming ſymptoms. Relapſes were common. But though the intermitting fever of this iſland was epidemic in a conſiderable degree, it was not by any means of a fatal nature. If neglected in the beginning, foundation was ſometimes laid for obſtinate complaints; but the diſeaſe was not fatal in its proper form to any one patient, who

who remained with the regiment. I cannot ſpeak with certainty of the iſſue of a few of the worſt caſes, which were ſent to the General Hoſpital, on the breaking up of the encampment in the month of November. The regiment was then embarked in tranſports, on an expedition to the ſouthward. The ſick were collected into one ſhip, which, after a ſtormy and tedious paſſage, arrived with the reſt of the fleet at Savanna, in Georgia, in the latter end of December. The voyage had an excellent effect on the health of the men. Out of a hundred and twenty convaleſcents, who embarked at New York, in the month of November, not a man died; and there only remained two, who were unfit for the ſervice of the field, on the day of our arrival in the Savanna river. During the months of January, February and March, the battalion of the regiment, in which I ſerved, was a total ſtranger to ſickneſs. It was employed in long and almoſt continual marching, till the latter end of April, when, encamping at Ebenezer, on the Savanna river, the intermitting fever ſoon made its appearance, and ſpread ſo rapidly, that before the end of June, very few remained, not only in this regiment, but even in the garriſon, who had not ſuffered more or leſs from this raging diſeaſe. It was

monly remarked in the hiſtory of this fever, that the type during the month of May, was uſually ſingle tertian, till the fifth or ſixth day; after which, paroxyſms were often obſerved daily, though generally unequal in force and duration: that is, the diſeaſe changed about this period, to a double tertian form. But though this was obſerved to be the caſe, during the greateſt part of May, the type of the fever was uſually double tertian, or quotidian, from its very commencement, in the month of June. The diſeaſe was then of the moſt ardent kind. The paroxyſms were ſeldom uſhered in by a cold fit; and the remiſſions, for the moſt part, were very indiſtinct and imperfect. The heat of the weather was exceſſive, during the greateſt part of the month; and ſtrange and alarming ſymptoms occurred frequently in the courſe of the diſeaſe. In ſome caſes a comatoſe diſpoſition, approaching to apoplexy, or rigid ſpaſms, reſembling a perfect tetanus, occupied the greateſt part of the paroxyſm; in others there were various local pains, deliria, bilious vomitings or purgings, with a multitude of other affections, which appeared on a ſuperficial view to conſtitute the whole of the complaint. Yet theſe ſymptoms declining after ſome continuance, recurred again at a ſtated hour, and were

were finally removed, or at leaſt ſuſpended, by the Peruvian bark. I left the garriſon of Ebenezer in the beginning of July, and went directly to Savanna, where the ſame epidemic prevailed, though in a degree of leſs frequency, and with ſymptoms of a leſs alarming nature than at the above-mentioned place. At Savanna, it uſually retained marks of diſtinct intermiſſion, and its type was often of the ſingle tertian kind;---in ſhort, it was ſimilar to the fever of Ebenezer, in the month of May. From Savanna, I went to Beaufort in the beginning of Auguſt. The fever, which uſually prevails at this ſeaſon of the year, in all the ſouthern provinces of North-America, was then epidemic among the troops, who were ſtationed on this iſland. The type, however, was ſtill more commonly ſingle tertian here, than at Savanna. The beginning of the paroxyſms was likewiſe more generally diſtinguiſhed by a cold fit; and the intermiſſions, for the moſt part, were more perfect and diſtinct. In a few caſes, indeed, marks of malignity were diſcoverable; yet the diſeaſe, upon the whole, was not of a fatal nature, or of obſtinate cure; though unleſs ſpeedily checked by bark, it often degenerated into dyſentery or dropſy, which were not only removed with difficulty, but in the circum-

circumſtances under which we laboured, were often of very precarious iſſue. This epidemic was ſtill acquiring force, when the outpoſts were ſummoned to the defence of Savanna. Its progreſs was, in ſome meaſure, ſuſpended during the active ſervice of the ſiege. The enemy, however, had no ſooner retired from before the place, than a fever began to rage with violence, which carried off prodigious numbers, particularly of the foreign troops. It was obſerved in the hiſtory of the preceding year, that few were attacked afreſh with the intermitting fever on York Iſland, ſo late as the months of October and November; but it was likewiſe remarked, that, where the diſeaſe happened at thoſe periods, the ſymptoms were oftener malignant or dangerous. The ſame was in ſome reſpects the caſe at Savanna. The fever, which made its appearance after the ſiege, was of an alarming and violent kind. Marks of diſtinct intermiſſion were ſeldom diſcoverable, delirium was a common ſymptom, ſpaſmodic affections were ſometimes violent, and the courſe of the diſorder was generally rapid. The rage of this epidemic ceaſed in December; but relapſes continued to return occaſionally, during the following winter; which was an unuſually ſevere one in that ſouthern latitude.

There

e likewiſe ſtill remained ſome dyſenteric laints, which reſiſted every mode of ment that could be deviſed. They ed however to the return of the warm her, aſſiſted, in no ſmall degree per-, by the active ſervice of the ſiege of leſtown. The recovery, indeed, was ſo plete, that, in the beginning of June, whole of the regiment arrived at Camden erfect health. The firſt battalion was to occupy a poſt at the Cheraws, on the Pedee. The diſtance is ſeventy-five s; yet ſuch was the ſpirit and activity of men, that they performed the march in e days, without fatigue or inconvenience. open field, between four and five hundred s from the bank of the river, was choſen the encampment of this battalion; while nation perfectly dry and cleared of wood, nearer to the bank, was reſerved for the mpment of the ſecond, which was not ected to arrive till after ſome time. In a night or three weeks, the intermitting r began to ſhew itſelf. It ſpread ſo ra-y, particularly in the ſecond battalion, t before the end of July, when the poſt abandoned, few were left who had not its influence. The prevailing ſymptoms his diſeaſe were much ſimilar to thoſe of the

it neceſſary that the poſt ſhould b
drawn; but there was much difficult
compliſhing it. Two thirds of both
and men were unable to march; and
not poſſible, in the ſituation in wh
were placed, to find waggons ſuffi
carry them, together with the neceſſa
viſions and baggage; ſo that no ot
ſource was left, than to convey ſome
them to George Town by water. Bo
therefore collected for this purpoſe, a
men were put into them, as were
leaſt likely to be ſoon fit for the ſervic
field. Theſe, however, unfortunat
into the hands of the militia, in thei
down the river, and were ſoon diſper
the different parts of the country; ſ
cannot ſpeak with certainty of the gene
of the diſeaſe. Thoſe who retired to
by land, improved unexpectedly in t
of their health in the courſe of the

the ſecond or third day's march, the changed frequently from double to ſingle n; at the ſame time that intermiſſions ne clear and diſtinct. It may be dif- t to determine preciſely to what cauſe might be owing; whether to removal a ſituation, where the fomes of the ſe was in a very concentrated ſtate; to nere exerciſe of travelling; or to the ef- of cooler weather with rain, which hap- d at this time, and which continued for or three days with little intermiſſion. whole of thoſe cauſes, perhaps, contri- d to operate this ſalutary change; though ill probably be reckoned among the firſt nces, where travelling and getting wet, ecommended as being uſeful in the cure vers. During the month of Auguſt, and eat part of September, the army remained mped near Camden. The weather was ffively hot, and fevers were frequent,--- etimes malignant and dangerous; though preſerved, in general, the diſtinct cha- er of intermittents. In the months of ober and November relapſes were nume- , and original attacks, though rare, were gerous and alarming when they hap- ed. Some inſtances of a diſeaſe were now rved of a more ſerious nature than any

any that had hitherto appeared. Inſt
diſtinct intermiſſions, which prevailed
the preceding months, the ſmalleſt tr
remiſſion were ſcarcely perceptible; the
tenance was duſky, and of a greaſy a
ance, the tongue was conſtantly d
parched; the head was often much af
and grangrenous ſpots ſometimes appe
the extremities. The duration of this
often did not exceed ſeven days; ſom
it continued a fortnight, or even longe
was generally of a fatal nature; and w
happened to people who had been ſub
the intermitting fever in the pre
months, it for the moſt part effected
change on the conſtitution, as deſtroy
tendency to relapſe. But beſides this u
ſpecies of diſeaſe, which ſometimes ap
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which is curious and important. Between thirty and forty of the men of the regiment entered upon the ſervice of the campaign in ſo weak a ſtate, that they were unable at firſt to carry their arms. They however gained ſtrength ſpeedily as they proceeded on the march; and ſeldom forgot to mention, that they felt a new acceſſion of vigour after every accidental relapſe. But I muſt further obſerve, that, together with the above changes which happened in the progreſs of the ſeaſon, the epidemic ſhewed a remarkable tendency to degenerate into dyſentery or dropſy in the months of September and October. The gripings in this ſpecies of dyſentery were often ſevere; the ſtools were large and watery; and times of aggravation and remiſſion were frequently obſerved, as in a regular intermittent. Indeed the intermittent, the dyſentery, and even the dropſical ſwellings ſo often alternated with one another, as evidently ſhewed that they all depended upon the ſame general cauſe. The campaign of the following winter was a very active one. The army travelled over a great extent of country, and was conſidered by many as performing very hard ſervice; but I have the ſatisfaction to add, that notwithſtanding occaſional forced marches, wading of rivers, expoſure to rain, acci-

any that had hitherto appeared.
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From the above ſhort hiſtory of the intermitting fever, as it appeared in the 71ſt regiment, in the different provinces of North America, where that corps happened to ſerve, we may be enabled to form ſome idea of the changes, which are more conſtantly produced by ſeaſon and climate, or which ariſe accidentally from the particular effects of local ſituation. In the ſpring and beginning of ſummer, the ſingle tertian was the moſt uſual type of the endemic of America, in every

province which the regiment viſited:---the paroxyſms were diſtinct, and the intermiſſions were generally perfect. In the months of June, July and Auguſt, double tertians were common, and in ſome ſituations baniſhed every ſimpler form. As the weather turned cool, the ſingle tertian reſumed its place; ſo that any other type was ſcarcely ever ſeen. But beſides the above changes of type, which in ſome degree followed the changes of ſeaſon, dyſentery or dropſy frequently made their appearance in the months of Auguſt, September and October, alternating with, or ſucceeding the intermittent; while fevers of a bad and uncommon kind were by no means rare in the months of October and November.

I have thus obſerved in a curſory manner the more general changes of the intermitting fever, as influenced by change of ſeaſon. I may alſo remark, that beſides ſeaſon, climate had a conſiderable effect in modifying the appearances of the diſeaſe. It thus happened, that the type was generally ſingle tertian on York Iſland, even in the heat of ſummer: in ſpring and winter other forms were rarely ſeen. In Georgia, the ſingle tertian was the prevailing form, only in the winter and ſpring. In ſummer, and ſome part of autumn, double tertians were common; and types of ſtill

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greater complication frequently made their appearance during this period, in ſome particular ſituations of the province. Dyſentery, dropſy and dangerous fevers were likewiſe more frequent here in the autumnal months, than they were found to be in the neighbourhood of New York; while the courſe of the intermittent, as long as the form was regular, was more ſpeedily checked by Peruvian Bark in Georgia, than in the more northern latitudes. The prevailing type of the climate of South Carolina, was ſingle tertian, even in the ſummer and autumn; yet where the forms of the diſeaſe was in a high ſtate of concentration, as at the Cheraws, the type was often ſo complicated that remiſſions were ſcarcely diſcernible. The tendency of the endemic of this province, to degenerate into dyſentery or dropſy in the autumn, was likewiſe leſs remarkable than in Georgia. The dangerous fevers of October and November were alſo fewer in number; though ſtill more frequent, and more formidable than in the province of New York. The province of Virginia lies about halfway between New York and Savanna; and the general effects of its climate, on the common endemic of the country, correſponded with its local ſituation.---Deviations from the tertian type

the fever of Ebenezer. The type was frequently double tertian, or quotidian; the remiſſions were indiſtinct; the bilious vomitings and purgings were often exceſſive, and marks of malignity appeared in ſeveral inſtances. The approach of the enemy made it neceſſary that the poſt ſhould be withdrawn; but there was much difficulty in accompliſhing it. Two thirds of both officers and men were unable to march; and it was not poſſible, in the ſituation in which we were placed, to find waggons ſufficient to carry them, together with the neceſſary proviſions and baggage; ſo that no other reſource was left, than to convey ſome part of them to George Town by water. Boats were therefore collected for this purpoſe, and ſuch men were put into them, as were judged leaſt likely to be ſoon fit for the ſervice of the field. Theſe, however, unfortunately fell into the hands of the militia, in their paſſage down the river, and were ſoon diſperſed into the different parts of the country; ſo that I cannot ſpeak with certainty of the general iſſue of the diſeaſe. Thoſe who retired to Camden by land, improved unexpectedly in the ſtate of their health, in the courſe of the march. During the time that we lay at the Cheraws, the remiſſions were generally obſcure; but

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It appears from what has been ſaid above, that the ſingle tertian is the proper fundamental type of North America. It undergoes, as we have ſeen, a regular change and alteration, in conſequence of the ordinary changes of the ſeaſons, as alſo in conſequence of the effects of the various climates of the different provinces of that extenſive continent: but beſides theſe changes, which are more general and certain, we likewiſe find, that the accidental circumſtances of local ſituation often produce very remarkable effects. In this manner, though the type of the fever which prevailed on York Iſland, was properly ſingle tertian; yet double tertians, and even more complicated forms, were not by any means rare, in a part of the battalion which lay contiguous to a ſwamp. The real nature of the endemic fever of Georgia, is, perhaps, properly of the intermitting kind; yet remiſſions were often ſcarcely perceptible at Ebenezer; which is ſituated immediately on the bank of the river Savanna, and which, in ſome degree, is ſurrounded by creeks of freſh water. It may not be improper to remark with regard to Ebenezer, that few places in America have been obſerved to be more unhealthful;

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to be ſpent in the frivolous preparations, which are uſually thought neceſſary to precede the giving of bark. If we judge it not to be proper in any caſe to venture upon the uſe of bark, before the body has been ſufficiently prepared by emetics and cathartics, we ſhall too often meet with inſtances where the courſe of the diſeaſe will be finiſhed before theſe preparations are compleated. It has happened oftener than once to myſelf, that the fatal paroxyſm commenced before I had gone through the uſual routine of preparation, which at that time I thought indiſpenſably neceſſary, before I attempted to cut ſhort the courſe of the fever by means of its well known ſpecific.

Having premiſed ſo much with regard to the general nature of the diſeaſe, I ſhall now add a few obſervations about the management of thoſe remedies which have been moſt uſually employed; ſome of which appear to be ſuperfluous; while there is only one of them which has a right to be conſidered as effectual. It is a common and obvious remark, that the intermitting fevers of the ſame ſeaſon ſhew a general tendency to run over a ſimilar courſe, though the modes of treatment may be ſometimes directly oppoſite. As I had often taken notice of this fact

fact during the time that I remained in America, I began to ſuſpect that the changes, which I had been accuſtomed to attribute to treatment, were in reality owing to a diſpoſition in the nature of the diſeaſe, which was little affected by the ordinary preſcriptions. But that I might in ſome degree aſcertain the truth of this ſuſpicion, I ſelected thirty caſes of fever, which had commenced within twenty-four hours of each other. This experiment was made at Ebenezer, in the month of May; where the diſeaſe, though highly epidemic, had not yet diſcovered any ſigns of malignity; ſo that danger was not apprehended from a delay of a few days. I claſſed thoſe thirty caſes in three diviſions, without paying regard to the nature of the ſymptoms of any individual caſe. To one I preſcribed a repetition of emetics, at ſuch intervals as were judged proper; for another, cathartics of various kinds, or managed in various manners; while I left the third wholly to its own courſe. I watched the progreſs of the diſeaſe attentively for the ſpace of eight days, and cannot pretend to ſay, that I obſerved any material difference in the changes or appearances of thoſe caſes, which were treated in ſo different a manner. The type, which was generally ſingle tertian at the commencement

mencement of the diſorder, changed for the moſt part to double tertian or quotidian, after the ſecond or third paroxyſm; though not in a different proportion, as far as I could judge, in thoſe which were left entirely to Nature, or which were treated in the manner which has been mentioned above. It deſerves however to be remarked, that the paroxyſms were uſually milder, more regular and diſtinct after the repeated uſe of carthartics; as alſo that bark ſucceeded more ſpeedily and more certainly after a repetition of antimonial emetics.

Where bleeding is judged to be proper or neceſſary in the cure of the intermitting fever, the circumſtances are generally ſuch as require that it precede every other in order of time. Bleeding was often found to be uſeful in particular caſes. It moderated the violence of ſymptoms, and ſeemed not to be without effect in removing a certain ſtate of the ſyſtem, which reſiſted the ſucceſsful operation of the bark; but I muſt likewiſe add, that there was ſeldom occaſion to employ it in the ſouthern provinces of America. It was blamed by ſome, as increaſing the diſpoſition to relapſe: of this, however, I can ſay nothing from my own experience; and as I am diſpoſed to believe, that the loſs of a moderate quantity of blood, ſeldom does material harm

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his diſeaſe; ſo I have reaſon to think, that
s ſeldom neceſſary in warm climates, par-
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Emetics have been employed in the cure
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many practitioners, who conſider their
as indiſpenſable; and ſome have pretended,
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etic tartar, ſo managed as to operate at
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y likewiſe diſappeared frequently, where
thing at all was done: ſo that I cannot
lp being of opinion, either that the real ef-
ts of emetics have been miſtaken, or that
e proper modes of managing them are not
nerally known. I muſt not however omit
mention, that emetics are occaſionally of
eat ſervice, and that antimonial emetics eſ-
pecially

pecially obviate the effects of inflammatory diatheſis, and on particular occaſions facilitate the ſucceſsful operation of the bark. They are likewiſe ſeldom followed by thoſe dangerous effects which frequently ariſe from the employment of them in fevers of Jamaica; though I certainly ſhould adviſe that they be uſed with great caution in the ſouthern provinces, in the ſummer and autumn, where the remiſſions of the fever are obſcure.

Cathartics have likewiſe been much employed by practitioners in the cure of intermitting fevers; and in few caſes perhaps can be omitted with ſafety. They certainly poſſeſs very remarkable effects in rendering the form of the diſeaſe regular and diſtinct; but they do not ſeem to be endued with a particular power of cutting ſhort its courſe.--- The circumſtances of the caſe can only point out the propriety or advantage of the various remedies of this claſs.

The above are the uſual modes of evacuation, which moſt practitioners conſider to be indiſputably neceſſary previous to the exhibition of bark. I muſt however remark, that caſes ſometimes occurred in the ſouthern provinces, particularly in the hot months of ſummer, which only admitted of thoſe evacuations in a ſmall degree. Inſtead of the

diſtinct

liſtinct and regular paroxyſms, which were xpected to follow the uſe of emetics or ca-hartics, the diſeaſe was ſometimes obſerved o aſſume a languid and continued form, in onſequence of ſuch treatment, while it like-viſe in ſome inſtances recovered the diſtinc-ion of paroxyſm and remiſſion, by means of pplications, which excited the tone and vi-our of the ſyſtem; particularly by means of xercise in cooler air, or accidentally by ex-oſure to rain.

Peruvian Bark is the chief remedy, upon which we now depend, for the cure of inter-nitting fevers. It is a remedy, which like others has undergone ſome reverſes of repu-ation, ſince its firſt introduction into Eu-rope; and, though its efficacy is now fully acknowledged, perhaps over-rated by Eng-liſh practitioners; it does not yet ſeem to have gained the ſame general credit with other Eu-ropean nations. The French uſe it with caution; and many of the Germans are ſtill its enemies. It has been accuſed even by ſome of the Engliſh writers, of failing in the cure of intermittents; and blamed by many of occaſioning complaints more dangerous in their nature than thoſe it was intended to remove. I was early aware of theſe objec-tions, and watched narrowly that I might diſcover

diſcover its real effects; and am warranted in ſaying, that it has every right to be conſidered as a ſpecific in ague and fever; while it is totally free from the imputation of occaſioning dyſentery, dropſy, or viſceral obſtructions. Thoſe complaints were always moſt frequent, where this remedy had been the moſt ſparingly employed.

But though I have mentioned that bark is both a ſafe and efficacious remedy in the cure of intermitting fevers; I muſt alſo confeſs, that it is only rendered ſo by particular modes of management. It is probable that much of the bark, which is now imported into England, is either in ſome ſhape adulterated, or naturally inferior in quality to what it had been in former times; as we often read of cures effected by a ſingle drachm in the laſt century, which we ſhould ſcarcely now expect from an ounce. Three or four ounces ſeldom failed of checking the progreſs of the moſt formidable fevers of America; one or two frequently did not produce any ſenſible effect. Being perfectly convinced of the truth of this obſervation, I generally gave bark in caſes, where the circumſtances were judged proper for its exhibition, in doſes of two drachms; which I directed to be repeated every two hours during the abſence of

of the fever. By this mode of treatment the diſeaſe was often ſo completely conquered, that the patient was frequently capable of returning to his duty in the ſpace of ſeven or eight days. Time ought not to be ſpent in frivolous preparations, or diſeaſes attacked with feeble remedies, where the health of ſoldiers is concerned. The ſpeedieſt cures are generally the beſt; and I have had many opportunities of witneſſing more health and ſtrength gained during eight days in the field, than I ſhould have expected from a month's eaſe in an hoſpital, aſſiſted by the beſt advice of the phyſicians. The above-mentioned quantity of bark, for the moſt part, was ſufficient to effect a cure in ordinary caſes of the diſeaſe; but where danger appeared to be threatning, the doſes were often increaſed to half an ounce, or even more. In ſome caſes of obſtinacy, indeed, accompanied with a ſluggiſhneſs of conſtitution, I obſerved no other rule in the quantity than ſuch as proved diſagreeable to the ſtomach, or excited a tumult in the ſyſtem. The method was often ſucceſsful; and I may obſerve in general, that two ounces taken at five or ſix times, and in the ſpace of eight or ten hours, were often more effectual, than double the quantity in ſmall doſes, and at long intervals. If the large

large doſes of bark, which I have recommended, ſhould appear to any one to be dangerous or unneceſſary; I may add, that I have myſelf frequently taken an ounce at once; while I have likewiſe obſerved the cure to be tedious and uncertain with the moderate doſes of ordinary practice. I may farther remark, that this remedy was often rejected by the ſtomach, and in ſome caſes paſſed off almoſt inſtantly by ſtool; yet that the courſe of the fever ſeemed to be no leſs effectually checked by it, than when ſuch effects did not occur.

The quantity of bark, which I frequently preſcribed in the intermitting fever of America, may appear to be greater than neceſſary; ſo the time, at which it was ſometimes given, may alſo appear to be premature. Bark was ſeldom given in the fevers of the ſpring and beginning of ſummer, unleſs in caſes of relapſe, till after ſufficient evacuations had been premiſed. In the autumnal months, where ſigns of malignity and danger were diſcovered, the firſt intermiſſion was often laid hold of: neither was it uniformly deemed neceſſary, to premiſe the evacuations of vomiting or purging. In relapſes I ſeldom let paſs the opportunity which the firſt intermiſſion afforded; by which means, thoſe who were ſubject to the

the returns of this diſeaſe, were rarely returned in the reports of the ſick.

Where bark was given in ſuch quantity, and in ſuch manner as I have mentioned above, it generally was ſucceſsful in checking the progreſs of the diſeaſe; yet I muſt not omit to obſerve, that inſtances ſometimes occurred, where it totally failed of this effect, under every mode of management that could be deviſed. It would be uſeful to aſcertain thoſe circumſtances exactly; but this is a taſk which I cannot promiſe to perform. It was however remarked, that where the inflammatory diatheſis prevailed in very evident degree, bark was frequently given without ſucceſs: and owing to this cauſe, perhaps, it was leſs to be truſted to in the ſpring, (unleſs in caſes of relapſe), than in the hot weather of ſummer and autumn. But beſides the obvious marks of inflammatory diatheſis, there appeared to be other conditions of the frame unfriendly to the ſucceſsful operations of bark. The exact nature of theſe, indeed, was perceived with difficulty; yet I have often obſerved them to be connected with ſome of the following circumſtances; viz. with a ſmall and hard pulſe, or with a pulſe where the ſtroke was obſcure or without expanſion, and where a creeping or vermicular motion was

obſerved in the ſtate of the artery; to which was ſometimes added, a conſtricted ſtate of the ſkin, a clammy moiſture on the ſurface of the body, without ſigns of free perſpiration, and together with a ſuſpenſion or irregular action of the nervous influence. In the ſtate deſcribed above, bark alone was often given in great quantity, without producing any ſenſible effect. It ſometimes ſucceeded when antimonials, opiates and other antiſpaſmodics were joined with it; but bliſters applied to the back part of the head and neck, were ſerviceable above all other remedies in removing thoſe circumſtances, whatever they were, which ſtood in the way of its ſucceſsful operation. In ſome caſes which had proved obſtinate to every other means, the diſeaſe diſappeared immediately after their application; and in every one where they were employed, ceaſed any longer to reſiſt the bark. Bark alone undoubtedly has a right to be conſidered as a ſpecific in the cure of the intermitting fever, but its virtues are occaſionally improved by the addition of aromatics, chalybeates, and particularly by a certain proportion of ſnake root. It was a practice with ſome of the country people of Carolina, to attempt the cure of the intermitting fever by means of Virginian ſnake root, given in doſes of two

ſcruples

ſcruples or half a drachm. I made a trial of that remedy in ſeveral inſtances; but did not find that it was ſucceſsful. Joined however with the Peruvian bark, in the proportion of two drachms to an ounce, it was often obſerved to produce very excellent effects. The cures were more complete and more permament. There was not only leſs tendency to relapſe, but dyſenteries and dropſies were more rare, after I was fortunate enough to adopt this mode of practice, than they had been during the preceding years.

There have been many different conjectures about the mode of the bark's operation in the cure of intermitting fevers; but none of them afford a ſatisfactory explanation of the ſubject. Bark is evidently bitter, aſtringent and aromatic; but how it becomes ſpecific in intermittents, in a degree ſo ſuperior to all other bitters, aſtringents and aromatics, is a myſtery we cannot eaſily comprehend. It obviouſly poſſeſſes a power of giving tone and vigour to the powers of life; and often communicates to the ſanguiferous ſyſtem, a certain ſtate or diſpoſition, known by the name of inflammatory diatheſis. Thus it is uſually obſerved, that where the nervous frame is weak and delicate, bark rarely failed of cutting ſhort the courſe of the diſeaſe, and its

ſucceſs in ſuch caſes, is preceded, for the moſt part, by apparent changes in the general diatheſis of the ſyſtem. If ſtrength, fulneſs, and vigour of pulſe follow the employment of bark, the fever frequently diſappears; but if thoſe ſigns are wanting, it is not poſſible to form any certain judgement of the future effect. In like manner, if ſigns of inflammatory diatheſis continue to prevail during the courſe of the diſeaſe, bark ſometimes changes it to a continued fever; but ſeldom checks its progreſs effectually. From theſe facts, which I have often ſeen verified, I am diſpoſed to conclude, that bark is only to be conſidered as an accidental ſpecific in the cure of intermittents, and that its ſalutary effects probably may be explained from the change, which it occaſions in the relative ſtate of the body. That bark is ſo often ſucceſsful depends, we may preſume, on the intermitting fever being ſo often connected with an attonic ſtate of the ſyſtem; from which cauſe it probably ariſes, that it is ſo much more effectual in ſummer and autumn, in warm weather and in warm climates, than in the oppoſite circumſtances. But though an attonic ſtate of the ſyſtem is frequently connected with intermitting fever, it is not conſtantly ſo; hence the diſeaſe is not invariably removed by thoſe proceſſes which

which excite tone, or give riſe to the inflammatory diatheſis. Exceſſive evacuations and other cauſes, by which the body has been reduced to the laſt ſtate of debility, have often interrupted the courſe of an intermittent. So that we have every reaſon to conclude, that bark is only relatively ſpecific, in as much as it deſtroys certain circumſtances of aptitude, which are eſſentially connected in particular ſituations with the exiſtence of the diſeaſe. In this manner, voyages, journeys, new purſuits, or new modes of life, frights, the active ſervice of the field, or the hardſhips of ſieges have often removed intermitting fevers, which had reſiſted the ordinary aids of medicine.

I obſerved in a former part of this treatiſe, that it was ſeldom a matter of much difficulty to ſtop the courſe of the intermitting fever of America; but I muſt now add, that it was always difficult, ſometimes impoſſible, to ſecure the patient againſt any future return of the diſeaſe. Bark, though much celebrated for this purpoſe, did not ſeem to prevent a relapſe with the ſame certainty with which it ſtopped the courſe of the fever, when actually preſent. It deſerves however to be remarked, that where bark had been given at regular intervals after the diſeaſe diſappeared, the paroxyſms

roxyſms in the relapſe were, in general, not only ſlighter, but had uſually more of the inflammatory diatheſis joined with them; while the complaint ſhewed more diſpoſition to terminate of its own accord, after a few revolutions. It is univerſally known, that the powers of bark ſeldom fail in the cure of intermitting fevers, where given in ſufficient quantity; yet I muſt alſo obſerve, that its virtues do not ſeem to extend farther than to a temporary ſuſpenſion of the paroxyſms. That bark does not elimenate or deſtroy the actual cauſe of the diſeaſe, appears plainly from this fact, that relapſes are frequently the conſequence of thoſe circumſtances, which occaſion debility, or which counteract the effects of this tonic remedy. To which we may add, that though relapſes are often of a different type from the original fever; yet, as they generally happen on an even day from the ſuppreſſion of the paroxyſm, there can be little room to doubt that the old complaint again reſumes its courſe, though it probably, in the mean time, loſes ſeveral of its original ſymptoms. It is a fact likewiſe which we ought not to omit mentioning, but which in general, does not ſeem to be much attended to, that ſome periods are more remarkable for the relapſe of intermitting fevers than others.

I ob-

I obſerved before, that relapſes almoſt conſtantly happen on the even days. I now add, that the moſt remarkable of theſe days are the ſixth, the eighth, twelfth, fourteenth, twentieth, twenty-ſecond, twenty-eighth and thirtieth. The fourteenth is remarkable for relapſes above all the others. Next to it we may rank the twelfth, twentieth and twenty-ſecond; unleſs in times of very prevailing ſickneſs, where the ſixth and eighth often come in for a great ſhare. If we take pains to examine the particular circumſtances of the patient, and attend to the nature and degree of the prevailing epidemic, we may often be enabled to form a tolerable conjecture with regard to the moſt probable period of return. Having therefore acquired from obſervation ſome general ideas of the different propenſities to relapſe in different ſituations, and in different ſubjects, I uſually began to give the bark in quantity, and to uſe other precautions on the fifth after the ſuppreſſion of the paroxyſm, in caſes where there were the ſtrongeſt ſuſpicions of a ſpeedy return; while this was delayed till the eleventh, nineteenth, or twenty-ſeventh in others, in proportion to the different degrees of healthineſs. This practice was continued for the ſpace of three days, or till the ſuſpicious period was paſt.

But I muſt further remark, that beſides the propenſity, which was obſerved in fevers to return at the periods above-mentioned, the approach to the new and full moon was likewiſe found to be connected with relapſes in a very remarkable manner. Independent therefore of the precautions, which were uſed at the ſeptenary periods, the approach to new and full moon was conſtantly attended to.

If the above directions were carefully complied with, we might in general prevent the diſeaſe from proving fatal, or from injuring the conſtitution materially, though I muſt at the ſame time confeſs, that we could in reality do little more than preſerve the patient in a valetudinary ſtate, till cool weather, a change of ſituation, or ſuch a change in the manner of life as excited the active powers of the conſtitution, contributed their part to effect a permanent eſtabliſhment of health. Being perfectly convinced of the truth of this obſervation, I generally remitted the men to the regiment, to be put upon the liſt of duty, as ſoon as I was certain that the courſe of the diſeaſe was actually ſtopt. The practice at firſt ſight may appear harſh; but I have found it to be ſalutary. Exerciſe, even ſome degree of exertion, promotes the recovery of health. Habits of ſloth and indolence

are

are ſpeedily contracted in hoſpitals: the military ardour is gradually extinguiſhed, and bodily ſtrength is recruited more ſlowly than in the field, under every diſadvantage of fatigue or inclement weather.---Of the truth of this I have had ample experience.

I have now pretty fully deſcribed the method of cure, which I purſued in the intermitting fever of America. I am not ignorant that other plans have been adopted, and other remedies employed by others; but as I have not had experience of any, except that which I have mentioned, I do not reckon myſelf qualified to furniſh any remarks on the ſubject. Bark, indeed, is ſo ſafe, and at the ſame time ſo effectual, that I ſhould be ſlow in recommending any other remedy, where this can be procured in ſufficient quantity. The ſtrongeſt proofs of its value ariſe from a comparative view of the mortality of the intermitting fever, in different regiments, which were employed on the ſame ſervice, but which were treated in different manners by their reſpective ſurgeons. The Heſſians were all of them inveterate enemies to the bark; and there were ever ſome of the Britiſh ſurgeons who employed it very ſparingly. The mortality among the troops truſted to the care of thoſe, was uniformly in great proportion. There

There was a Heſſian regiment, the ſituation of which I had the opportunity of knowing exactly, that loſt one third of its men by this diſeaſe and its effects, during one year's ſervice in Georgia. There were Britiſh regiments alſo, which loſt more than a fourth; while there were others, which did not loſe a twentieth. The whole of theſe regiments were engaged on the ſame ſervices; they were all alike foreigners in America; and there appeared to be no obvious cauſe for ſo great a difference in the degree of mortality, except a difference in the management of the bark. Bark was ſcarcely ever employed in one caſe; in another it was uſed with timidity; whilſt it was given with the earlieſt opportunity, and in quantities far exceeding the uſual practice in the third.

I have deſcribed, in the preceeding pages, the method which I adopted in the cure of the intermitting fever of America, whilſt that fever preſerved its diſtinct and proper form. I have likewiſe mentioned the beſt means I am acquainted with, of guarding againſt its return; and it will not be improper in the next place, that I add a few remarks on ſome of its moſt uſual and formidable effects. The intermitting fever of America ſhewed a ſtrong diſpoſition to change into a ſpecies of dyſentery,

or a purging and griping at particular
of the year, and more eſpecially in
ular local ſituations. Dropſy was like-
frequent effect of this complaint, and
ctions of the viſcera were not by any
uncommon, where the intermittent,
neglect or other circumſtances, had been
d to go on in an uninterrupted courſe.
e changes from intermitting fever to
tery, and from dyſentery to intermitting
were ſo frequent in the months of
ſt and September, that thoſe diſeaſes
d evidently to depend on the ſame ge-
courſe; aſſuming at different times the
r the other form, from cauſes which we
ſeldom aſcertain. In thoſe caſes of dy-
y, the ſtools were uncommonly copious
watery, and remiſſions and exacerbations
ently appeared at regular periods; but
gh the cure was often attempted by the
it did not in general ſucceed.

muſt begin with acknowledging, that I
not be able to give a complete or ac-
e hiſtory of the progreſs and final ter-
tion of this ſpecies of dyſentery, into
h the intermitting fever is ſo much diſ-
l to degenerate; as I ſhall likewiſe only
it in my power to mention the general
ods of cure, which were purſued in the
earlier

earlier ſtages of the diſeaſe. Where it was found that a cure could not be accompliſhed in a reaſonable time in the field or regimental hoſpital, dyſenteric patients were generally removed to places where they could meet with better accommodation; ſo that the diſeaſe in its latter ſtages has ſeldomer fallen under my obſervation.

I muſt obſerve in the firſt place, that this ſpecies of dyſentery had no right to be conſidered as an infectious diſeaſe. It appeared in fact to be no more than an intermitting fever, which, from ſome cauſe or other excited its principal force on the alimentary canal. Remiſſions and exacerbations were generally obſervable in the one diſeaſe, as well as in the other in the earlier ſtages; yet theſe appearances became gradually leſs and leſs remarkable, and there appeared at laſt marks of permanent affection of the inteſtines. The ſkin now became dry and harſh, the fleſh waſted, and the bowels were uncommonly irritable, particularly where the *prickly heat* had retired from the ſurface; the diſeaſe was now evidently ſupported by the exiſtence of permanent local affection.

With regard to the cure of this ſpecies of complaint I have little to obſerve, which is not generally known. Bark was ſometimes employed

ployed to check its courſe; yet I muſt nfeſs, that bark alone was ſeldom found be ſucceſsful. Where there were no marks an actual inflammatory ſtate of the ſtomach d bowels, it ſucceeded better when joined th aromatics, powder of camomile flowers, d particularly with ſnake root. Laxatives ere preſcribed frequently, and ſeemed often be proper. They were however more eful where ſome other thing was joined ith them, which had the quality of deter- ining to the ſkin. Opium in various forms as a common remedy; and often a uſeful e before there were marks of permanent fection of the inteſtines. Ipecacuanha, or ch preparations of antimony as promoted e evacuations by the ſkin, were frequently ombined with it. The great object which purſued in this diſeaſe was to reſtore and pport a free perſpiration, to diminiſh the irritability, and to ſtrengthen the tone of the alimentary canal. I was diſpoſed to expect benefit from warm bathing, frictions, &c. but the ſituation in which we were placed did not admit of a trial of them. Exerciſe was proper, and even ſome degree of exertion. Change of air was ſerviceable in many caſes, well ſeaſoned food in ſome, and wine in others. The above plan was purſued in the beginning

the ſtools bloody, with a very irri
of the bowels. In ſuch caſes there
ulceration, various degrees of infla
or obſtructions in the coats of the
Bliſters, applied to abdomen or l
kept open, were often ſerviceable;
ted glyſters, varied according to t
and ſeat of the affection, were li
benefit; and in the latter ſtages I
much good from the employment
aſtringents. In illuſtration of th
mention the caſe of an officer, wh
tacked with this ſpecies of dyſent
after the ſiege of Savanna. Eve
which the medical people of the
could ſuggeſt was put into executi
out much benefit. The diſeaſe
through the whole of the winter,
material abatement; the fleſh wa
ſkin became dry, with ſuch other
as are uſual in this complaint. In

which appeared to be poſſeſſed of a conſiderable ſhare of aſtringency. It checked the purging and griping inſtantly; ſo that the diſeaſe ceaſed for the ſpace of three weeks. The appetite was good, the ſtools copious, and in ſome degree lienteric. The griping and even purging at laſt returned: the decoction was repeated, but had not the ſame effects. Other aſtringents, the extract of logwood, terra japonica, &c. checked it for a ſhort time, but no material ground was gained. He died in the month of May.

Dropſy ſucceeding, and ſometimes alternating with intermitting fever, was not by any means a rare appearance in America, particularly in ſome ſeaſons, and in ſome ſituations. The ſwellings generally prevailed in every part of the body. They were uſually leucophlegmatic, though I have alſo ſeen ſome inſtances of tympanitis; a diſeaſe which was commonly ſuppoſed to proceed from improper management of the bark.

With regard to the cure of dropſical complaints, I have little to obſerve which is not generally known. It conſiſted not only in evacuating the water, but in communicating to the ſyſtem ſuch a degree of tone and vigour as reſiſted farther accumulation. With this view exerciſe, and even ſome degree of exertion,

ertion, was proper: wine, even more ſtimu-
lating liquors, high ſeaſoned food, friction
and warm cloathing, were ſerviceable. I
ſhould likewiſe have been diſpoſed to expect
benefit from ſea bathing; but I cannot ven-
ture to ſay, that I have ever made a proper
trial of it. Bliſters were alſo uſeful; not
only as occaſioning a diſcharge of the watery
but as exciting the action of the vaſcular
ſyſtem. Among the numerous claſs of diu-
retics, there is not any one, which has
powerful effects as cantharides, in ſubſtance
or in tincture; and among the corroborants
I ſhould be inclined to give the preference to
chalybeates, colombo root, and Peruvian
bark. It may not be improper to mention
in this place, that I have ſeen ſome inſtances
where a general anaſarca has been completely
cured by the accidental ſupervening of con-
vulſions.

Obſtructions of the abdominal viſcera are
likewiſe reckoned among the common effects
of intermitting fevers. They are frequently
attributed to the early or improper uſe of
bark; but appear in fact generally to ariſe
from the long continuance of the diſeaſe. I
cannot add any thing to the manner of treat-
ing them that is not known to every one.

CHAP.

CHAP. XIII.

A GENERAL REVIEW OF THE PRACTICE OF PRECEDING AUTHOURS IN FEBRILE DISEASES.

HAVING deſcribed the method of cure, which I followed in the remitting fever of Jamaica, the yellow fever and intermitting fever of America; it will not, I hope, be deemed ſuperfluous to give a ſhort ſketch of the general principles, which have directed the practice of phyſicians in febrile diſeaſes, from the days of Hippocrates, till the preſent times; a ſubject of which I have not as yet ſeen a connected view. There is reaſon to believe that the ſcience of medicine made conſiderable progreſs in different parts of the world, particularly in Egypt, at an early period; but diſtinct records of the art, prior to the age of Hippocrates, are either loſt, or ſo blended with the writings which are aſſigned to that authour, that we do not know how to diſtinguiſh them. The practice of Hippocrates in fevers, has been accuſed of being feeble and inert; and it is certain, that many of the moſt effectual remedies of modern times, were unknown to that ve-

nerable phyſician; yet if we take the pains to eſtimate candidly the whole mode of proceeding, we ſhall be forced to acknowledge, that its effects were leſs inactive than has been generally imagined. The mode of treatment adopted by the Coan Sage, ſeems not only to have done evident good, but ſometimes to have actually cut ſhort the courſe of the diſeaſe. Sweating at an early period, the most effectual means we yet know of cutting off the courſe of fevers, was employed frequently by this authour; and though antimonials were then unknown, yet ſweat, excited by a ſimple proceſs, was often obſerved to produce very deciſive effects. Hippocrates, indeed, has been leſs circumſtantial in the detail of remedies than we could have wiſhed. He has however related the dietetic part very diſtinctly. His rules are always judicious, and his regimen ſometimes of ſuch efficacy as evidently to operate very conſiderable changes in the ſtate of the ſyſtem. It appears frequently to have been his aim to attempt to exterminate the fever in its early periods, or to endeavour to cut ſhort its courſe abruptly by direct or indirect oppoſition to its proximate cauſe: yet this idea was not purſued beyond a certain point. After the fourth day had paſſed, Hippocrates uſually contented himſelf

himſelf with ſupporting the general powers of life with proper diet and nouriſhment, allowing nature after that period to perform the work her own way:--in other words, to complete the buſineſs by the ſlower operations of coction and criſis. Theſe two views, viz. the attempts to cut ſhort the diſeaſe abruptly in its beginning; or in the late periods, the endeavours to ſupport the powers of life, till the natural termination might arrive, comprehend the general rules of practice followed by this celebrated phyſician: and I much doubt if the moderns, notwithſtanding all their pretenſions, have actually diſcovered any other indications more deciſive, though I willingly allow, that they have made great improvements in the mode of executing thoſe I have mentioned. At leaſt, I acknowledge for my own part, that I am not yet acquainted with any mode of treatment, by which the natural courſe of a continued, or even obſcurely remitting fever can certainly be prevented, after the firſt days of the diſeaſe are paſt; that is, after a diſtinct formation of the type: before that happened, the ſweating proceſs is frequently ſucceſsful. But though the attempt to cut ſhort the diſeaſe in its beginning, or to ſupport the powers of life in the later periods, comprehend this authour's general rule

of practice; yet we find conſiderable diverſity in the manner of accompliſhing theſe different purpoſes. The ἐναντία ἐναντίοις, or an attempt to counteract the derangements of morbid cauſes, may be conſidered as the firſt general maxim, which was eſtabliſhed in the cure of diſeaſes. Hippocrates has this maxim conſtantly in his eye, and endeavours by various means, according to a ſuppoſed diverſity in the mode of action, to cut off the immediate exiſtence of fever. In this manner the preſence of heat and bile, or the ſuppoſition of obſtructed perſpiration, have ſeverally furniſhed him with different indications. His ideas however are not preciſe; ſo that his practice frequently fluctuates between conjecture and experiment. If the diſeaſe does not yield to one mode of treatment in a given time, he frequently paſſes to its oppoſite mode at random. (1) But I ſhall endeavour to ſubjoin in notes, a ſtill more particular view of his method of proceeding, in the different ſpecies of fevers.

The doctrines of Hippocrates acquired ſuch general credit, in every part of the world where they were known, that we do not remark any material innovations in the cure of fevers, till the time of Eraſiſtratus; a ſpace of near two hundred years. The intervening

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period, indeed, was diſtinguiſhed by philoſophers, who employed their time in inveſtigating the ſtructure and economy of the human frame, as well as by phyſicians, who improved the art of medicine by the invention of new remedies. Plato, Ariſtotle and Theophraſtus were the moſt eminent of the former; (2) Petro is chiefly diſtinguiſhed among the latter. This authour, as we find recorded both by Celſus and Galen, attempted to extinguiſh a fever by copious drenching with cold water; ſoon after which, he nouriſhed his patient with wine and ſtrong foods, a cuſtom which was in ſome degree imitated by Cleophantus. Hints, however, of the firſt of thoſe practices are found in the writings of Hippocrates, ſo that we may juſtly conſider Eraſiſtratus, as the firſt who departed ſo far from the principles of the Coan Sage, or who arrived at ſo high reputation, as to be regarded by poſterity as the authour of a new method of curing diſeaſes. I mentioned in a former part of this treatiſe, the opinion which Eraſiſtratus entertained concerning the cauſe of fevers. All that we know of his practice may be comprized in a few words. Eraſiſtratus was every where the inveterate enemy of bleeding. He was likewiſe the authour of a certain plan of abſtinence, which, with a little

modification from Aſclepiades and Themiſon, made a conſpicuous figure in the annals of phyſic for ſeveral ſucceeding ages.

Herophilus, who lived much about the ſame time with Eraſiſtratus, acquired alſo high reputation in the medical world; but unfortunately we have it not in our power to give a particular detail of his diſcoveries. Soon after the period I have mentioned, the ſcience of medicine was divided into three diſtinct branches; viz. as the art is employed to remove diſeaſes by diet, by drugs, or by manual operation. Serapion likewiſe, who is conſidered as the authour of the empiric ſect, made his appearance not long after this diviſion of the profeſſion into ſeparate branches. His followers were numerous, and many of them were reſpectable; but we are not enabled to give a diſtinct account of their practice on the ſubject of fevers. The ſummary views of Celſus and Pliny, or the accidental fragments in the voluminous works of Galen, furniſh only imperfect information. Contentions, however, ran high between dogmatics and empirics, the former of whom were chiefly guided by reaſonings, as the latter truſted ſolely to experience.

The Greeks, for many ages, were the only people we are acquainted with, who cultivated

ted the ſciences with induſtry. For near five hundred years they were almoſt excluſively the profeſſors of the healing art. The Romans were cautious of admitting the refinements of learning into their ſtate; and had nearly attained the height of their glory, before they willingly received phyſicians into their city. Aſclepiades the Bithynian, the contemporary and friend of Pompey and Cicero, appears to be the firſt, who practiſed medicine at Rome with any degree of reputation. This authour left his native country, with the deſign of inſtructing the Roman youth in the arts of eloquence; an acquirement, which was held in high eſtimation among that warlike people; but not ſucceeding in this purſuit, according to his wiſhes, he ſoon diſcovered, that the profeſſion of medicine offered a fair opening for the exerciſe of his talents. The ſtate of the art, indeed, was then peculiarly propitious to his undertaking; the former fame of Hippocrates being divided between Eraſiſtratus and Herophilus, and ſome authours of the empiric ſect. Aſclepiades was too diſcerning not to perceive, that new doctrines could not fail of drawing followers, and too enterprizing not to attempt to carry this purpoſe into execution. He probably, in the firſt place, read over all that

had been written by former phyſicians; the moſt eſſential parts of which, he ſelected with a good deal of art, and ſo modified as to form a ſyſtem, which appeared to be complete and which exhibited upon the whole, conſiderable appearances of novelty. If we take the pains to trace his opinions to their ſources, we ſhall find that Democrites or Epicurus furniſhed him with his philoſophy, that Herodicus ſupplied him with the hints of bathing, friction, and geſtation, that the plan of abſtinence, or faſting for three days, was learnt from Eraſiſtratus; and that Petron and Cleophantus inſtructed him in the practice of giving cold water, and of allowing greater indulgence in the uſe of wine.---But though the authours I have mentioned furniſhed Aſclepiades with the hints of his doctrines and practice; yet we may obſerve, that he has always modelled theſe after his own faſhion, and carried them farther than had ever been done by their original inventors. It was remarked above, that the profeſſion of medicine was divided into different ſects before the time of Aſclepiades; yet, as far as we can judge from the imperfect information which has been tranſmitted to us, (4) this authour was the firſt, who deſerves the name of an active phyſician. Previous to the time of this enter-

rprizing Bithynian, medical men truſted cure of fevers chiefly to the efforts of na- ; and were only ſolicitous about the mode leath. Aſclepiades, aſſuming a bolder ciple, endeavoured to cut ſhort the fever he midſt of its courſe: and it is reaſonable uppoſe, that by ſtepping ſuddenly from extremes of torture to the higheſt grati- tion of the appetites, ſuch changes were ted in the ſtate of the ſyſtem, as probably etimes accompliſhed the purpoſe. Such e the general views of this authour. It not be improper to add a few remarks on e of the remedies which he employed.

5) It is impoſſible to fix the date, when tion and warm bathing were firſt num- d among the aſſiſtances of the phyſicians. y appear, however, from the teſtimony of ſus, to have been uſed with caution by the ients. Aſclepiades not only indulged in n with freedom, but ſo conducted the agement of bathing, that it might be ly conſidered as a luxury of the higheſt ance. Geſtation, another of the gymnaſ- remedies employed by this authour, even n early period of ardent fever, is an expe- ent of a ſtill bolder and more deſperate d; and ſuch as ſucceeding writers with one e ſeem to have condemned:---perhaps without

without examination or fair trial. I am ſenſible that the opinion, which I am to offer on this ſubject, is not likely to meet with general approbation; but the opportunity which I enjoyed, during the late war, of ſerving with a regiment, which was almoſt conſtantly in the field, enables me to confirm the truth of it by ample experience. The good effects of geſtation or travelling, even in aukward conveyances, were very obvious in almoſt every ſtage and ſituation of the ardent bilious fever; but I ſhall relate ſome inſtances of its ſucceſs, which appear to preclude all poſſibility of doubt. At Ebenezer in Georgia, at a ſeaſon, when the thermometer, in the cooleſt part of the houſe, often ſtood at ninety-ſix, and even ſometimes roſe above it, I was ſeized with the ardent bilious fever, which at that time made dreadful ravage among the troops. For ſix or ſeven days I did not once ſhut my eyes; my thirſt was great, yet every ſort of liquid, which I could procure, was nauſeous; the diſtinction of paroxyſm and remiſſion was no longer perceivable; the pulſe, at the wriſt, was neither uncommonly frequent nor ſtrong; but the pulſation of the deſcending aorta was ſo great, as to ſhake the whole frame; anxiety and reſtleſſneſs were intolerable: in ſhort, the torment was ſo exceſſive,

ceſſive, that human nature could ſcarcely ſuffer more. The ſituation was precarious; and without much reflexion I indulged the deſire of being carried to Savanna; though the diſtance was not leſs than twenty-five miles. An open carriage, the only conveyance which the country afforded, was provided for the purpoſe; and I was put into it, in a very feeble and diſtreſſed condition. Fortunately the day was cloudy, and cooler than ordinary. The roads were likewiſe ſoft and ſandy. Though the carriage was very defective, the motion was no ways unpleaſant; and I had not travelled two miles before I felt a wonderful increaſe of vigour. It rained heavily about half way, and before I reached Savanna, I was drenched to the ſkin. The effects which might have been expected, did not follow. Inſtead of being hurt, I was ſurprizingly benefited. I walked into the houſe with ſtrength and firmneſs, eat ſomething without diſlike, and ſlept ſound the following night; in ſhort, obtained a perfect remiſſion of the fever. This is a ſtrong inſtance of the good effects of travelling in fevers; yet it is only a ſolitary one. I ſhall add another, which places the fact on a ſtill firmer baſis. I mentioned in a former part of this treatiſe, that while the 71ſt regiment lay at the Cheraws, the endemic

of the country prevailed among the men in a moſt unuſual degree. The diſeaſe was often without diſtinction of paroxyſm and remiſſion; the anxiety and reſtleſsneſs were intolerable; bilious vomitings and purgings were frequent, and exceſſive. While near two hundred men were in this ſituation, an order arrived for abandoning the poſt. It being impoſſible, as we were ſituated, to provide waggons to tranſport ſo great a number of ſick, about forty of thoſe who were leaſt likely to be ſoon fit for ſervice were ſent down the river in boats. Of the particular fate of this party I cannot ſpeak with certainty; but I have the ſatisfaction to add, that not a man died of thoſe who retired to Camden by land; and that after the third day, ſcarcely a fever was left, which had not aſſumed a regular intermitting form. This appears at firſt ſight almoſt an incontrovertible proof of the ſalutary effects of geſtation; but I muſt not at the ſame time omit to mention, that benefit alſo probably reſulted from a change, which accidentally happened in the ſtate of the weather. The weather, (which, during the time we remained at the Cheraws was uncommonly hot,) became unexpectedly cool after the march was begun; together with rain, from which the ſick men had nothing

to

to ſhelter themſelves. This inſtance of expoſure to rain furniſhes a proof of a fact of much importance. It is generally believed that getting wet with rain is hurtful to a perſon in health. It is no leſs commonly ſuppoſed to be certainly pernicious in ſickneſs; but the contrary appears to be ſometimes the caſe. I have ſeen the happieſt effects from the application of cold, even from getting accidentally wet with rain in many inſtances, beſides the preſent. Increaſe of force and vigour was generally the conſequence; and life was evidently protracted, ſometimes perhaps ſaved, by accidents, or modes of treatment, which, in the common opinion of mankind, would have been reckoned the cauſes of death.---But though I have mentioned the accidental good effects of agitation, and even of expoſure to rain in different ſtates of the ardent fever; I ſhall not be ſo paradoxical, as to recommend ſuch experiments in common practice. I muſt however be allowed to obſerve, that we have little cauſe to be afraid of their pernicious effects. Motion and travelling, as far as my experience goes, were conſtantly hurtful in caſes of local pain and inflammation; or in derangement of intellect; but, on the contrary, conſtantly ſerviceable in anxiety and reſt-

reſtleſsneſs, depending on the ſtate of the ſtomach; as alſo in affections of the biliary ſyſtem.

I mentioned before, that Aſclepiades practiſed medicine at Rome with great reputation. He propagated his doctrines with a good deal of ſucceſs; but ſuch is, and ever has been the fate of our conjectural art, that no ſyſtem has yet preſerved its credit undiminiſhed for any length of time. The views of phyſicians, with regard to diſeaſes, had hitherto been various and complex; even fevers had been often conſidered, by the ſame perſons, as depending on different cauſes. Themiſon, a pupil of Aſclepiades, attempted to remove the perplexity which neceſſarily ariſes from this inſtability of arbitrary conjecture; and endeavoured to reduce all the diſorders, to which the human body is liable, to two general claſſes; viz. to thoſe which ariſe from an increaſed degree of ſtricture, or its oppoſite affection, preternatural laxity; to which he afterwards ſubjoined ſome complaints, which appeared to partake of the nature of both. The idea of ſimplifying diſeaſes did not probably ariſe in the mind of Themiſon, till the latter period of his life; on which account, perhaps, the doctrines were left in ſome meaſure unfiniſhed; and it is to Theſſalus who

who lived in the time of Nero, that we are indebted for completing the methodic ſyſtem, and for enlarging the bounds of its fame. Soranus likewiſe added to its credit. It is a misfortune, which we muſt regret, that except Cœlius Aurelianus, there is not one of the many authours who were attached to the tenets of this ſect, whoſe works have eſcaped the wreck of accident or time. This only remaining authour appears to have copied, by his own confeſſion, almoſt literally from Soranus.

It does not belong to this place to enter deeply into the tenets of the ſect, with regard to diſeaſes in general; but leads to views of ſome importance in the theory and treatment of many diſorders. It proceeds on the ſuppoſition of circulation in all parts of the body; and with a little latitude may be ſuppoſed to comprehend the affections of the animated ſolid or contractile fibre. Fever is conſidered by the writers of this ſyſtem, as a diſeaſe of the claſs of ſtricture; and if we had authority to add ſpaſmodic, we might believe the methodics had diſcovered a very important phenomenon in the hiſtory of febrile diſeaſes. But this ſome may think is granting them too much. If we take the trouble to trace their doctrine, reſpecting the cauſe of fever,

fever, to its ſource, we ſhall find that the hints of it are furniſhed expreſsly by Aſclepiades, who perhaps borrowed his ideas on the ſubject from Eraſiſtratus, or even from Hippocrates. But as ſtricture, aſſigned by the writers of the methodic ſect as the cauſe of fever, is not perhaps radically different from the obſtruction of preceding authours; ſo we do not find much material difference in their manner of conducting the cure. The followers of Hippocrates, Eraſiſtratus and Themiſon proceeded equally on the idea of reſtoring permeability in the minuter canals of the ſyſtem; a purpoſe which they conceived would be beſt affected by certain proceſſes of attenuation and relaxation. Thus Hippocrates diluted plentifully, and gave nouriſhment only ſparingly, during the firſt days of a fever. Eraſiſtratus enjoined a general abſtinence, Aſclepiades preſcribed a term for the duration of the abſtinence; while Themiſon limited it ſo rigidly to the ſpace of three days, that the practice was diſtinguiſhed by the name of diatriton, as its followers were known by that of diatritarii. This idea of diatriton conſtituted an object of much importance in the ſyſtem of the methodic phyſicians. It directed all their movements, and is the only view, which can properly be called their own.

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The mode of application of the remedies of preceding authours was occaſionally modified by this ſect; but except that, which I have juſt mentioned, we do not diſcover much that is fundamentally new.

(6) It may not be improper in this place to take notice of the practice of cold bathing in fevers, which was introduced at Rome in the infancy of the methodic ſect; and which afterwards acquired great celebrity in different parts of the world. The Emperour Auguſtus, who for the greateſt part of his life was afflicted with ill health, was at laſt attacked with a complaint of ſo obſtinate a kind, that the uſual applications did not afford him any relief. Warm bathing and all that train of remedies had been tried in vain. The Emperour was ſenſible of his deſperate ſituation; and his phyſician Antonius Muſa, baffled in all his attempts, ventured, though apparently at great hazard, to preſcribe the cold bath. The health of Auguſtus was unexpectedly reſtored by it; and the phyſician was highly honoured, and amply rewarded. It is a misfortune that we do not know the ſpecific nature of the diſeaſe, under which the Emperour laboured; but we have reaſon to conclude, from the circumſtances which attended the cure, that it was a fever of a

bilious remitting kind; perhaps complicated with catarrhal affection, and waſting of the body. But though the ſucceſs of cold bathing, in the inſtance I have mentioned, was much greater than expectation; yet the remedy did not long retain its credit. It was ſoon afterwards employed in the caſe of Marcellus, a youth of great hopes, and preſumptive heir to the empire; but the event proving unfortunate, it fell ſuddenly into diſrepute, ---probably without ſufficient cauſe. (7) We find however that Celſus, in leſs than half a century, afterwards ventured to recommend it in a certain ſpecies of the ſlow or hectic fever; though (8) Charmes, a phyſician of Marſeilles, appears actually to be the firſt who rendered the uſe of the remedy general. (9) Galen employed it frequently with great freedom and boldneſs. (10) The Arabians, particularly in peſtilential diſeaſes, went ſtill farther than the Greeks or Romans; and we preſume, from the fact recorded by Buſbequius, that it was ſometimes preſcribed at Conſtantinople, even ſo late as the ſixteenth century. I do not know that it has been often tried in Europe, ſince the revival of the medical ſciences in the Weſt. I mentioned in a former part of this treatiſe, that I had employed it frequently in the fevers of Jamaica;

Jamaica; I now add, that I have ventured upon it in the fevers of this country with ſo great ſucceſs, that I ſhould expect the moſt beneficial effects might reſult from a proper management of it. (11)

We are indebted to Celſus, who lived in the time of Tiberius, for preſerving many of the opinions and practices of preceding phyſicians, which otherwiſe would probably have been loſt. This authour, not leſs remarkable for candour than for the elegance and perſpicuity of his manner of writing, does not ſeem to have been blindly devoted to the tenets of any particular ſect. He has favoured us with valuable extracts from the works of the moſt celebrated Dogmatics; he has likewiſe taken notice of the moſt remarkable opinions and practices of the Empirics, without omitting to mention the innovations of Aſclepiades and Themiſon. With regard to his particular merit as a phyſician, we may obſerve that he every where diſcovers an excellent judgement, and that his practice is generally decided without being raſh. (12)

So great have been the ravages of time or accident among the writings of the early phyſicians, that it is ſcarcely poſſible altogether to avoid error, in attempting to trace the various revolutions in medical practice,

prior to the time of Galen. From that downwards we are enabled to give a more certain and better connected view of the ſubject; there being few of the principal writers of this latter period, who have not been preſerved entire. When Galen came firſt to Rome, which was in the time of the Emperour Antoninus, the practice of medicine was chiefly in the hands of the followers of the methodic ſyſtem. The practice of diatriton, or abſtinence for three days, was then in high faſhion, not only with the profeſſed pupils of Theſſalus; but even with the few remaining adherents of Eraſiſtratus. Galen every where declares himſelf its inveterate enemy; and often tranſgreſſes the bounds of liberality and decency, in his attempts to turn it into ridicule. His own endeavours are expreſsly exerted to revive and eſtabliſh the principles of Hippocrates; and to complete thoſe parts, which the want of time or the want of experience of his maſter had left imperfect. He poſſeſſed uncommon fertility of genius, a great flow of language, and a judgement by no means deficient; yet, from a ſophiſtical ſpirit of philoſophizing, he frequently ſo entangled his opinions with theoretical diſtinctions, that his views are often uncertain, and ſometimes embarraſſing. The

principle with which he ſets out is directly to oppoſe the actual exiſtence of fever; he next recommends to remove, at leaſt to avoid an increaſe of thoſe cauſes which give riſe to the diſeaſe. Theſe ideas are drawn from the writings of Hippocrates, and are ſuch as no perſon will diſpute: but, as the cauſes of fever are ſuppoſed, both by Hippocrates and Galen, to be many and various; ſo the indications of cure often require to be executed in different, and ſometimes in directly oppoſite manners. This neceſſarily gives riſe to confuſion; and entangles the practitioner in the mazes of doubt and conjecture; to obviate which, as much as poſſible, the learned commentator of Hippocrates has thought fit to devide fevers into three general kinds, viz. ephemeral, continued, and hectic or habitual; the cauſes of which he ſuppoſes to be ſo little analogous to one another, as to demand particular management in the method of cure.--- But that the doctrines of this authour may be better illuſtrated, I ſhall tranſcribe in notes an example of each of theſe ſeveral ſpecies of fever, where the mode of treatment is minutely detailed. (13)

We look in vain for new views, or material improvements in the management of fevers, in the writings of thoſe Greek phy-

ſicians who followed Galen. Oribaſius profeſſedly is no more than a collector of the opinions and practices of other men; and (14) Aetius, on the preſent ſubject, does not aſpire to much higher fame. There are, indeed, few of his obſervations which may not be found in the volumes of Galen, or ſome preceding writer; yet he ſeems generally to have comprehended what he wrote. He digeſted the knowledge which he found in books with care and judgement; and gives an arrangement ſo clear and perſpicuous, that the perſon may derive information from Aetius, who would be overwhelmed and loſt in the prolixity of Galen's diſcuſſions.

From thoſe writers, however, who trod implicitly in the footſteps of Galen, we muſt be allowed to ſeparate Alexander of Tralle, a phyſician who lived in the ſixth century. (15) This authour wrote his book on fevers at a very advanced age; and though the treatiſe perhaps does not contain many ideas which may not, in ſome ſhape or other, be found in the writings of his predeceſſors; yet the obſervations have the appearance every where of having originally ariſen from actual experience. The language, which is conciſe, clear and perſpicuous, is wholly his own. The ambiguous circumſtances of diſeaſes are more

more accurately diſcriminated than in any preceding work which has deſcended to the preſent times; and though the manner of accounting for things may be ſometimes erroneous; yet it has had little influence on the practical indications, which are almoſt unexceptionably judicious. As Alexander of Tralle wrote at a time of life when fame muſt have been indifferent to him, and to a friend, whom he was more ſolicitous to inſtruct than to amuſe with the ſplendour and variety of his learning, we have an additional cauſe to give our confidence to his obſervations. His manner is candid and ingenuous; and the treatiſe before us may be conſidered by the practical phyſician, as the moſt valuable of the remains of the ancients. Judicious cautions are every where interſperſed, and conſiderable changes in the management of remedies are ſometimes attempted; but the practice of giving opiates in a certain ſtate of fever is the only practice of this authour, which has any title to be called innovation.

Paulus is the next phyſician of note, who lived after the days of Galen. He was born in the iſland of Aegina, and travelled over many countries. It is probable that he was ſufficiently acquainted with every diſcovery,

which had been made by his predeceſſors; yet Galen, on the ſubject of fever, is the authour whoſe works he has principally followed. His book on fevers, indeed, contains all the material doctrines and obſervations of that voluminous writer; and thoſe who dread the labour of encountering the prolix and ſophiſtical diſquiſitions of the commentator of Hippocrates, may find a very diſtinct analyſis of his opinions and practices in the treatiſe of Paulus Aegineta. (16)

Having endeavoured in the preceding pages to give a ſhort view of the methods which were uſually purſued by the moſt eminent of the Greek phyſicians, in the cure of fevers, it will be neceſſary in the next place to take ſome notice of the improvements of their immediate ſucceſſors, the Arabians. This task will be ſoon performed; the Arabians have not in reality opened any views in the curative indications of febrile diſeaſes, which were unknown to their predeceſſors; or which require that we ſhould ſpend long time in endeavouring to explain them. The medical ſcience evidently drew its origin from the Eaſt; yet it was alſo ſoon reconveyed to the countries from whence it ſprung, with improvements and additions from the genius of the Greeks. We learn from Herodotus, that Democedes, a na-

native of Crotone, who had ſtudied medi-
e in the iſland of Aegina, far excelled all
: phyſicians of the Perſian court, even ſo
ly as the time of the firſt Darius; though
: court of this Prince probably could boaſt
all the ſkill, both of Aſſyria and of Egypt.
:ſias ſometime after was held in great eſti-
tion by Artaxerxes; and the invitation,
ich was held out to Hippocrates by the
rſian monarch, indicates very clearly, that
: Greeks, even then, were more famed for
dical ſkill than the inhabitants of the Eaſ-
n countries. The iſlands and ſhores of the
diterranean ſeem through the whole hiſtory
medicine, to have produced the greateſt
mber of phyſicians. Crotone and Cyrene
re famous for ſeveral ages: and Alexandria,
a later period, roſe into great celebrity.
dents flocked to it from every part of the
rld; it was even neceſſary that every one,
o aſpired to wealth or reputation in phyſic,
uld ſpend ſome time in this celebrated ſe-
nary. It was owing perhaps, in ſome de-
e, to the vicinity of this illuſtrious ſchool,
t the province of Syria enjoyed, at one
ie, a conſiderable ſhare of learning and
rned men. The works of the moſt emi-
nt of the Greek phyſicians were tranſlated
o the dialect of the Syrian country, in the
ſeventh

ſeventh and eighth centuries; by which means they were probably, in ſome meaſure, propagated in the Eaſt: though we alſo are informed by Abulpharage, an Arabic writer, who had preſerved many curious anecdotes of private hiſtory, that the doctrines of Hippocrates were planted in the Choraſan, at a ſtill earlier age, by the phyſicians, who followed in the train of Aurelian's daughter, who was married to Sapores, king of Perſia: nor is it improbable, that theſe doctrines were ſtill more generally diffuſed through the Perſian dominions, by the alliances of friendſhip, as well as by the long wars, which were afterwards carried on between the Greek empire and the celebrated Khorrou Pawiz. But though the inhabitants of Syria and Irak were an enlightened nation, at an early period; their neighbours, the Arabians, who afterwards attained ſo great a name in ſcience no leſs than in war, remained long in a ſtate of illiterate ignorance. Before the eſtabliſhment of iſlamiſm, there ſcarcely was a native Arab, who could either write or read. The little genius they poſſeſſed was chiefly exerted in compoſing verſes, or in colouring a rhetorical harangue. They appear, indeed, to have acquired ſome practical knowledge of the motions of the heavenly bodies; and it is likewiſe

wiſe reaſonable to ſuppoſe, that they had the ſame ſkill in medicine, as is common to ſage nations; but there is no reaſon to believe, that they, as yet, had made progreſs in the medical art, conſidered in a ſcientific view. Hareth, a native of Tayef, who lived in the time of the prophet, and who ſeems to have been in habits of intimacy with that ſingular man, is the firſt of the Arabs, whoſe name is recorded among the phyſicians of the eaſt. This perſon, who acquired ſome knowledge of medicine at Niſabour, and other places in the Cheraſan, returned home after ſome time, with great wealth, and no ſmall ſhare of fame. He practiſed among his countrymen with much reputation; but how far he ſpread the light of ſcience among them is uncertain. The Saracens advanced rapidly in conqueſts and the eſtabliſhment of their faith; but we do not hear any thing of their progreſs in the healing art, till the ninth century. Syrians and Perſians, generally of the Jewiſh or Chriſtian religion, laboured ſometimes for the warlike Arabs in the ſervile occupation of curing diſeaſes; at leaſt we do not know that any of the Saracens attained much eminence in medical ſcience, till the tranſlations of Honain and his pupils laid open to them the treaſures of the Greeks. We are

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ill qualified at this period to judge of the merit of theſe tranſlations. But if we may be allowed to form concluſions, from the uſe which has been made of them, we ſhall not, perhaps, be diſpoſed to entertain a very high opinion of their accuracy. In many inſtances, the later Arabian phyſicians have expreſſed the ideas of Hippocrates and Galen only very looſely; and in ſome few caſes, perhaps, have not very clearly comprehended their meaning. But, as the later Saracens were ſeldom ſkilled in any language except their own; the original tranſlators are probably alone blameable for the whole of theſe miſtakes.

The medical authours, who wrote in the Arabic language between the ninth and fifteenth centuries, and, who ſtill lie concealed in the leſs acceſſible dreſs of their native country, are almoſt innumerable: neither are thoſe, who have been introduced into the common acquaintance of Europeans few in number, or ſmall in volume. If I poſſeſſed a complete ſeries, even of thoſe who are commonly known in Europe, the examination I have entered upon might be drawn out to a conſiderable length; but as I have no hopes of obtaining that ſoon, I ſhall content myſelf with giving ſome idea of the

Arabian

Arabian ſyſtem of practice in fevers, from the works of Avicenna, the moſt eminent and beſt known of the Oriental phyſicians. An examination, indeed, of one of the writers of this nation may, in a great meaſure, render an inquiry into the others unneceſſary. Thoſe, at leaſt whom I have ſeen, do not differ materially from one another; or perhaps eſſentially from the Greeks who went before them. The canon medicine, the principal work of Avicenna, exhibits a ſyſtematic view of the whole art of medicine, theoretical as well as practical. I have read over with care all that relates to fevers; and though there is little, perhaps, which may not ultimately be traced to Galen or Hippocrates; yet the authour has not copied ſervilely from either of them. He is more full and particular than the one; leſs prolix and tedious than the other. I muſt however remark, that the diſtinctions and diviſions, which he has attempted to introduce into the hiſtory of fevers, are not only unneceſſary, but actually ſerve to embarraſs the indications of cure. His general theories are thoſe of Galen. In the general conduct of the cure, he treads in the footſteps of the ſame maſter. He appears, indeed, to be more fearful of the lancet; while he is not perhaps always judicious, or conſiſtent

ſiſtent with himſelf, in the manner of employing it. On the contrary, he has admitted cool air rather more freely, and has perhaps carried cold drink even to a bolder length, than had been done by the Greeks. Cool air, cold drink, and even the external application of cold, may be reckoned among the moſt effectual remedies in the fevers of hot climates; and this authour has conducted the management of them, in a luxurious, elegant and efficacious manner. (17) But though the works of Avicenna furniſh a general view of the practice of the Arabian ſchool of phyſic, it is ſtill in ſome degree a defective one. (18) As he has not furniſhed us with a detail of the caſe of an individual, we are not able to judge preciſely of his powers of diſcerning the diſeaſe, or of his deciſion in the manner of treating it.

The medical ſcience, which after the taking of Alexandria was little cultivated by the ſlothful Greeks, or barbarous nations of the Weſt, ſprung up with new vigour in the province of Syria, in Irak and Arabia; and followed every where in the train of the Saracen conquerours. Extending with their arms over the northern coaſts of Africa, it ſoon found its way into Spain; and, even ſo early as the eleventh century, was conveyed

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to Salernum in Italy, by Conſtantinus Africanus, a native of Carthage, who had lived long in Aſia, and who was well acquainted with the language and medical knowledge of the Orientals. The Arabians were the firſt who opened the ſources of chemiſtry; they alſo made great improvements in the art of ſurgery, and even deſcribed ſome complaints which in earlier ages were not taken notice of; but they departed but little from the ſyſtem of the Greeks in the management of febrile diſeaſes. After the fall of the Roman empire the genius of learning made no exertion in Europe for a very long period of time. The native Europeans ſlothfully acquieſced in the imperfect knowledge of Arabian writers, which was obtained from the inelegant, and perhaps often unfaithful tranſlations of the Jews, who, for a conſiderable time, were no contemptible profeſſors of the medical art. But, though ſome part of the knowledge of the Arabian phyſicians was communicated, in this manner to the nations of the Weſt, in the eleventh and twelfth centuries; yet a part of the ſixteenth paſſed over, before it was poſſible to trace any marks of improvement. Commentaries, were written without number; but, for many years, there ſcarcely was an individual in all the ſeminaries

of

of Europe, who dared to think for himſelf. It has been cuſtomary to date the revival of the ſciences in the Weſt from the taking of Conſtantinople, by which the ſtores of Greek literature were in ſome degree opened to the world. The language of Galen began then to be more generally underſtood, and the writings of Avicenna fell rapidly into neglect; yet the advantage which accrued to medicine from the change, does not appear to have been great. The mind was exerciſed in a wider field of learning; but it was ſtill in chains to the authority of the ancients. The opinions of Galen and Hippocrates were copied, recopied and commented upon by hundreds; but there were very few who ventured to uſed any judgement of their own. Among the moſt celebrated of the followers of Galen we may reckon Fernelius, Foreſtus, Lommius and Sennertus, men of conſiderable talents, but who were too ſcrupulouſly devoted to the principles of their maſter, to open a new road in the practice of the art. This was reſerved for Paracelſus, who early in the ſixteenth century ventured to attack the opinions of his predeceſſors, and the authority of Galen. Paracelſus poſſeſſed a conſummate ſhare of aſſurance, together with knowledge of remedies which were not generally known

at

that time. He acquired ſome acquain-
ce with the chemical diſcoveries of the
ibians, in the courſe of his various travels,
applied in practice what he had learned, on
return to his native country. He deſpiſed
authority of the regular phyſicians, em-
yed remedies with great boldneſs, and
n with ſingular ſucceſs. This ſucceſs was
n very probably exaggerated by report;
there appear to have been many, who
owed his ſteps implicitly; while others
ted themſelves in modifying and improving
ideas. Under this laſt view we may rank
) Van Helmont, a perſon, who effected
ry material innovation in the manner of
ng febrile diſeaſes. Van Helmont poſſeſſed
ſiderable learning; but diſcovered, at the
e time ſuch marks of warmth and enthu-
n of genius, as diminiſhed his credit with
temporary and ſucceeding practitioners.
: terms which he employs, are ſometimes
:ulous; and his reaſonings are frequently
gured with fancy and whim; yet his
s are generally important, and often well
ded. The archæus of this authour does
differ materially from the ſentient prin-
e (τα σωματα) of Hippocrates; and perhaps
prehends the whole idea of the vis medi-
ix naturæ of the moderns. Van Helmont

proceeds to the cure of fever on the important principle of exciting, or calling forth the powers of life, to exterminate an offending cauſe; ſo that we may actually conſider him as the firſt, after Aſclepiades, who attempted to take the buſineſs wholly out of the hands of nature. He diſregards the proceſſes of coction and criſis; and makes a decided effort to cut the diſeaſe ſhort at an early period. He is likewiſe an enemy to bleeding, purging, vomiting, and the various evacuations which had been employed by his predeceſſors, attempting to accompliſh his purpoſe ſolely by the means of ſweat, and inſenſible perſpiration. The ſucceſs of his practice was ſo great, that he deems the man unworthy the name of phyſician who ſuffers a fever to exceed the fourth day; a degree of ſucceſs, which all the powers of antimony have not yet enabled us to boaſt of.

The circulation of the blood having been proved inconteſtably about the middle of the laſt century, hopes were reaſonably entertained, that the healing art would be benefited by the diſcovery. It does not however appear that medical men, for ſome time at leaſt, either argued more clearly, or practiſed more ſucceſsfully. The advocates of the galenical and chemical ſchools had gradually approached

approached to each other; ſo that the doctrines and practices of thoſe contending parties were now inſenſibly blended together. Sometimes the one mode of thinking predominated, ſometimes the other; but chemical principles every where gave ſcope to the imagination, which often indulged in the wildeſt extravagance of conjecture. Among the number of thoſe conjecturers, who arrived at much eminence and fame, we may reckon Sylvius de le Bae, who lived in the end of the laſt century, and introduced a conſiderable innovation in the manner of treating fevers. His theories are generally known. They appear to be totally deſtitute of foundation; yet unfortunately are the groundwork of all his practical indications. His principal view conſiſts, in regulating the mixtures of bile and pancreatic juice. He likewiſe lays ſo great a ſtreſs upon the nature of the occaſional cauſe, as gives riſe to doubt and ambiguity. Thus he ſometimes prescribes acids, tho' oftener aromatics, volatiles, and opiates. (20) But as we poſſeſs ſome caſes, which he appears to have healed, in the Leyden hoſpital, with all his ſkill and attention, we are enabled with more certainty to form a judgement of the particular merits of his practice. It has not any claim to ex-

traordinary ſucceſs; yet it is evidently innocent of the great harm which ſome later authours have imputed to it. In ſhort, if we except opiates, we may conſider the reſt of his remedies as very feeble and ineffectual.

During the time that Sylvius flouriſhed in Holland, a new theory of fevers was offered to the public in England by Dr. Willis, the celebrated authour, to whom we are ſo much indebted for bringing into view the importance of the nervous ſyſtem, in the economy of the human frame. It does not however appear that this writer's theory ever extended far, or that it was the cauſe of much innovation in practice(21).

The method of treatment, which was generally adopted in the fevers of England, at the time when Sydenham began to ſtudy medicine, conſiſted principally in bleeding, in vomiting with antimonials, in evacuating the inteſtinal canal by means of glyſters or gentle laxatives; and, in the later periods of the diſeaſe, in attempting to raiſe ſweat by hotter alexipharmics. In (22) the firſt conſtitution of ſeaſons deſcribed by this authour, viz the years 1661,-62,-63,-and 64, we do not find any material deviation from this general plan of cure; which was the plan followed by Willis, and other contemporary phyſicians

In

n (23) the next conſtitution, viz. the years 667, 68 and part of 69, Sydenham forces imſelf on our obſervation by an attempt to ffect a very important innòvation. The ver which prevailed during the laſt menoned years was generally of long duration. t was uſually accompanied with profuſe eatings, and often diſtinguiſhed by petehial eruptions. Cordials, and hot regimen ere ſometimes obſerved to cut ſhort its courſe bruptly; yet dangerous ſymptoms were ſtill ore frequently the conſequence of this ſtiulating mode of treatment, than a favourble termination. The ſagacious Sydenham, ſtructed by repeated experience of the bad ffects of this common method of cure, dopted a contrary one; which he purſued ith boldneſs, and apparently with great ſucſs. It may not be improper to obſerve in is place, that our authour is not to be conſidered as the inventor of the antiphlogiſtic ethod of treating fevers. The ancients, rticularly the Arabians, carried the cooling ſtem ſtill farther than the moderns. About is time however it had fallen into general eglect; and Sydenham undoubtedly poſſeſſes e merit of reſtoring it; more perhaps from is own obſervation, than from a knowledge f what had been done by his predeceſſors.

Part (24) of the year 1669, the years 1670, 1671 and 1672, form another conſtitution of ſeaſons, according to this authour's arrangement of diſeaſes. The epidemic aſſumed a different appearance from the former. It was chiefly diſtinguiſhed by ſymptoms of dyſenteric affection. Our authour, however, ſtill adhered to the outlines of the antiphlogiſtic plan; and treated the diſeaſe ſucceſsfully with bleeding, and the repeated uſe of lantives. The method of treatment, which he adopted, admits of a remark. In the former epidemic, the profuſe ſweatings were checked; in the preſent, the inteſtinal evacuations were encouraged; in one caſe he appeared to promote, in the other to thwart the intentions of nature; practices ſo oppoſite that we cannot eaſily reconcile them. (25) The next conſtitution, viz. the years 1673, 74 and 75 diſcovered a fever with a new train of ſymptoms, and in Sydenham's opinion of a very different race. It was principally diſtinguiſhed by pleuretic and rheumatic affections, by coma and ſtupor. The general antiphlogiſtic practice was ſtill perſiſted in; and the whole of the cure was truſted to diſcretional bleeding, bliſtering the back part of the head and neck, with the repeated employment of glyſters. The hotter diaphoretics were cautiouſly

tiouſly avoided. (26) In the year 1684, this diligent obſerver imagined he diſcovered the appearance of a fever of a perfectly new and unknown kind; a fever accompanied with more or leſs derangement of intellect, and many other ſymptoms of nervous affection; the ſpecies of diſeaſe, perhaps, which Noſologiſts have diſtinguiſhed by the name of Typhus. But though this ſpecies of fever was ſuppoſed by our authour, to be extremely different in its nature from any that he had yet ſeen, we do not however perceive, that this has ſuggeſted to him any material difference in the mode of treatment.

From the ſhort view which has been given of Sydenham's practice in fevers, it is eaſy to perceive the riſe and progreſs of the method of cure which he adopted. Antiphlogiſtic proceſſes were carried to a greater length by the ancients, than the moderns have yet dared to riſk. But there is little reaſon to ſuppoſe, that Sydenham owed the ideas of the alterations which he introduced to information from preceding writers. His practice bears every where authentic marks of having ariſen from his own obſervation. The moſt common termination of fevers, is by ſweating or increaſed perſpiration; a fault obſerved by Van Helmont, and which furniſhed that au-

thour with the idea of proſecuting the cure of the diſeaſe wholly on this plan. The practice ſeems to have been early adopted in many parts of Europe; and it even continued in general reputation in England, at the time that Sydenham began his medical ſtudies. Sweating undoubtedly is often beneficial, and may be conſidered, upon the whole, as the moſt certain means of exterminating the cauſe of fevers; yet bad effects often reſulted from it---then probably more owing to the manner in which it was conducted, than to the real hurtfulneſs of the thing itſelf, viewed in the light of a general remedy. Sydenham, who does not appear to have diſcriminated between the actual effects of ſweating and the effects of the manner of exciting it, condemns the practice in general terms, and paſſes to an oppoſite method of treatment with a good deal of boldneſs. It has ever unfortunately been the fate of phyſic, like every other conjectural art, to paſs from one extreme to its oppoſite by large ſtrides; and thus, even the ſagacious Sydenham, who had ſeen the bad effects of treating remedies in fevers with much of the inflammatory diatheſis, was induced to employ antiphlogiſtic proceſſes in thoſe ſpecies of diſeaſe, which we ſhould be diſpoſed to believe do not well admit of them.

The

e new, or nervous fever, in the opinion
he practitioners of the preſent age, could
well bear the plentiful evacuations pre-
bed by this authour; at leaſt, we may
ly affirm, that ſuch evacuations are not by
means neceſſary. But I ſhall diſmiſs this
ject with obſerving, that the practice of
lenham, if we except the article of bleed-
, can only be conſidered as feeble, and
often inſignificant. His remedies ſome-
es, perhaps, obviate the fatal tendency of
ptoms; but are not capable of having any
ided effects on the natural courſe of the
eaſe. I may likewiſe add, that his prac-
e is directly at war with the principle of
theory. If fever is conſidered an effort of
ture to exterminate ſomething hurtful
the conſtitution, bleeding and thoſe
cuations, which diminiſh the powers of
, are not the proper means of effecting
purpoſe. But the truth is, the practice
Sydenham was his own; his theory was
t of the times in which he lived, formed
a mixture of the doctrines of Van Hel-
nt, Campanella and Dr. Willis.

It may not be ſuſpected, perhaps, from the
marks which I have made on the practice of
denham in fevers, that I do not conſider
m as the authour of ſo much eſſential im-

provement,

provement, as has been generally imagined. I muſt however acknowledge, that he deſerves the higheſt praiſe for the accurate and well diſcriminated hiſtory of acute diſeaſes, which he has left us. The deſcriptions are complete, and the circumſtances ſo peculiarly choſen, that the diſeaſe itſelf is actually before the eyes of the reader. Theſe are the great, and as yet the unrivalled excellencies of Sydenham; but in admitting ſuch eſſential differences in the cauſe of epidemics as he has done, he neceſſarily leads us to embarraſſment, and often leaves the practitioner in a ſtate of uncertainty. The diſeaſe deſcribed by Sydenham, in the various conſtitutions of ſeaſons between the years 1661 and 1685, ſhews external marks of conſiderable diverſity; yet I muſt confeſs, that I ſee but little reaſon for ſuppoſing, that theſe appearances ariſe from cauſes which are totally and fundamently diſtinct. The fever of Sydenham, in all its forms, is in fact the common endemic of England. Circumſtances however often aroſe then, and ſtill ariſe, which modify the general cauſe in ſuch a manner, that the diſeaſe appears at one time with ſymptoms of inflammatory diatheſis, at another with ſymptoms of nervous affection, and at another, with a general diſpoſition to affections of particular

ticular organs. Theſe modifying cauſes, which are more general or particular, more obvious or obſcure, often continue for a certain train of ſeaſons, and influence very materially the character of the reigning epidemic. The general cauſe of the fever is in reality one and the ſame, yet I muſt alſo acknowledge, that the modifications are evidently many and various, and often very remotely different from each other.

Chemical principles for ſome time paſt, had the principal ſhare in enabling medical writers to account for the phenomena in fevers; but about the end of laſt century, the mechanical philoſophy was again revived, and being incorporated with the doctrines of the chemiſts, the laws, and various derangements of the human frame, were then explained on the principles of hydraulics, or chemical mixture. The authours who adopted this mode of reaſoning were numerous, and ſome of them were of great eminence; but at preſent I ſhall only take notice of one of the greateſt of them, the celebrated Boerhaave, who formed a ſyſtem, which was conſidered as the moſt perfect that had hitherto been offered to the public. The doctrines of this authour acquired uncommon fame. They ſoon extended over all Europe, and,

and, indeed, ſtill prevail in the greateſt part of it. But though Boerhaave has preſented us with a methodical explanation of the phenomena in fevers; and has detailed the method of cure with clearneſs and preciſion; yet we do not find, that he has furniſhed much that is new and original in practice. (27) He is every where cautious, and in moſt inſtances judicious; though he has committed a principal error in forming indications of cure, from a ſuppoſition of lentor and viſcidity; a cauſe the very exiſtence of which we have every reaſon to doubt.

During the time that Boerhaave flouriſhed in Holland, indeed before this authour had arrived at much reputation, Profeſſor Stahl, at Halle in Saxony, propoſed ſome new opinions, which acquired conſiderable fame, and which have been conſidered, in ſome manner, as forming a peculiar ſyſtem. The leading principle of this authour, as is confeſſed by all, admits only of a feeble and inactive practice. I might even add, that it frequently leads to a pernicious one. Thoſe tumults, or ſufferings, which paſs by the name of the efforts of nature, are extremely deceitful; and have obviouſly, in many inſtances, a deſtructive tendency. I mentioned before that they are truſted with danger; yet Stahl, proceeding

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n this principle, boaſts extraordinary ſucceſs a the cure of the petechial fever, which prevailed in moſt parts of Saxony towards the nd of laſt century (28).

In a review of thoſe authours, who have written on febrile diſeaſes, it would be unjuſt o omit mentioning Hoffman, contemporary with Stahl, and profeſſor in the ſame univerity. The actual alterations which this authour has introduced into the cure of fevers, re not perhaps very great in themſelves; yet is important diſcoveries, in regard to its heory, entitle him to great conſideration. The moſt of the remedies, which he employed, are found in the writings of his preleceſſors, or contemporaries; yet they were not, perhaps, always preſcribed by them with the ſame intentions. The theory of Hoffman opens a road for the trial of antiſpaſmodics, merely on the footing of antiſpaſmodics; a claſs of remedies of much importance in the cure of febrile diſorders. In practice, Hoffman is more decided than Stahl; and his views, perhaps, are more extenſive than thoſe of Boerhaave. (29) He is likewiſe uncommonly candid; and has furniſhed us with a great variety of hiſtories, which ſerve in many caſes to illuſtrate the nature of the diſeaſe.

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The antiphlogiſtic method of treating fevers, the ground-work of which was laid by Sydenham, and improved by Boerhaave, prevailed in moſt parts of Europe, without material alteration, till near the preſent times. Bliſtering with cantharides, which had been employed with caution, and which was even ſuſpected of deleterious effects by many, was introduced into practice in the end of the ſixteenth century, and about the beginning of the preſent began to be, as employed, a common remedy in many ſpecies of fever: its good effects were often obvious, and, according to the prevailing mode of reaſoning, were ſuppoſed to ariſe from a quality which cantharides were believed to poſſeſs, *of attenuating* the blood. This mode of operation is no longer admitted; but the remedy ſtill retains its credit. Few people pretend that bliſters are poſſeſſed of ſpecific powers in ſhortening the courſe of fevers; yet every one allows, that they obviate many ſymptoms of dangerous tendency, and that they often diſpoſe the diſeaſe to aſſume its proper form. In fevers, accompanied with local affection, their beneficial effects are univerſally acknowledged; and, even in many caſes of general irritability, they often produce very fortunate changes. But I muſt obſerve, with regard

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is, that much depends on management, he mode of application. In local affec-, the local application is moſt effectual; ſes accompanied with much general irri-ity, the back part of the head and neck t, perhaps, to be preferred to others. ve thus frequently ſeen in fevers, where was much general irritability, that ra applied to the extremities evidently avated the diſeaſe; while I have alſo ob-d, that they as certainly diminiſhed the neſs and frequency of the pulſe, and diſ-d the patient to reſt, where they were ap-l to the back part of the head and neck. re is another remedy that I ſhall take ce of before leaving this ſubject, which eſſes ſtill higher reputation than bliſters. monial preparations have been em-ed occaſionally in fevers for many years ; but they did not gain eſtabliſhed credit his country, till within theſe thirty years. diſcovery of the famous powder of Dr. es appears to have been the cauſe of a ſiderable innovation, in the manner of ting febrile diſeaſes. The practice of rhaave did not go farther than to obviate ptoms of fatal tendency; it left the diſ-to purſue its own courſe. Dr. James med a bolder ground, and promiſed to cut

ſhort

ſhort the fever abruptly by means of his powder. There are many who ſtill tread in his footſteps; I acknowledge, as I have hinted before, that their attempts may be often ſucceſsful in the early ſtages of the illneſs, or often uſeful towards a critical period. I cannot however believe, that this powder, or any preparation of antimony with which we are yet acquainted, poſſeſſes the power of abruptly terminating a fever wherever it is employed; at leaſt, to effect this requires a management of which I confeſs myſelf ignorant. The effects which Dr. James promiſed from his powder, others have attempted to obtain from emetic tartar; but I have reaſon to think with inferior ſucceſs.

The wonderful power, which the Peruvian bark is obſerved to poſſeſs, in ſuſpending the courſe of intermittents, has led the practitioners of the preſent times to employ it, with the ſame views, in fevers of various denominations. But after what I have ſaid of the uncertainty of its effects in checking the courſe of the remitting fever of Jamaica, it will be needleſs to repeat here, that I do not expect to find it of much efficacy, in ſhortning fevers of a more continued kind. I muſt however confeſs, that, even in many of theſe, it is a remedy of great value. It ſupports, in a very

very eminent degree, the tone and vigour of the powers of life.

Opium has been preſcribed occaſionally in fevers for a long time paſt; but it is only of late years, that it has been recommended, as a general remedy in ſome particular ſpecies of this diſeaſe. The practitioners of the Weſt Indies, preſcribe opium with more freedom, than is generally done in England. It is frequently employed to mitigate ſymptoms; and, in ſome ſituations which were very alarming, I have given it in very large quantity, with unexpected good effects. In the ſlow fevers of this country I have frequently had recourſe to it; and, combined with antimonials and camphire, have found it to be a remedy of great value. Opium in general was more cordial than wine. In caſes of deſpondence and diſtreſs it gave a confidence to the mind, and imparted a pleaſureableneſs to the ſenſations above all other remedies. In ſhort, it appeared often, not only to be inſtrumental in conducting the diſeaſe to a favourable termination, but it enabled the patient to paſs through it with comfort to himſelf.

I have mentioned in the preceding pages, the moſt eminent of thoſe authours, who have written on the cure of fevers; giving at the ſame time ſuch extracts from their works, that

the reader, who has not the opportunity of conſulting the originals, may be enabled to form ſome idea of the ſucceſſive changes, the improvements, and oftener perhaps the corruptions, which have ariſen in the method of treating febrile diſeaſes, from the earlieſt records of the art to the preſent times. The apparent changes are more numerous than the real ones; while the moſt oppoſite modes of treatment do not often appear to have much perceptible effect on the event. The cure of fever has been hitherto purſued on two general and oppoſite views, viz. on the idea of exciting the powers of life, by means of heating and ſtimulating remedies; or of diminiſhing the reaction of the ſyſtem, by evacuations and other antiphlogiſtic proceſſes. The above extremes of thoſe directly oppoſite modes of treatment have approached gradually to each other, or been variouſly combined by different practitioners. It cannot however fail of appearing ſtrange to a perſon, who views the ſcience of medicine in a philoſophical light, to hear one ſet of men aſſerting that the proper cure of fever conſiſts in exciting the powers of life, or in enabling nature to expel the diſeaſe by force; while another, with no leſs confidence, maintains that the plan of moderating or diminiſhing increaſed action is that

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which ought alone to be purſued. From ſuch contradictory aſſertions we cannot eaſily avoid concluding, either that the moſt oppoſite means produce the ſame effect, or that nature has a preſcribed mode of proceeding in fevers, which ordinary medical aſſiſtance is not powerful enough to controul. There are many eminent practitioners who have been conſcious of this truth. The candid Sydenham himſelf acknowledges, that thoſe, whom he treated with all his ſkill and attention, and who poſſeſſed all the comforts that affluence could afford, did not often fare better than the poor, who were only ſparingly furniſhed with neceſſaries, and who met with little aſſiſtance from medicine. I have myſelf ſeen many examples of the ſame kind. Sometimes I purſued the uſual methods of cure with care and perſeverance; ſometimes I left the buſineſs almoſt entirely to nature; and I cannot ſay, that the difference of the event gives me much cauſe to be vain. But though I may appear to be ſceptical with regard to the effects of common practice, I ſtill cannot help being of opinion, that we may arrive at a high degree of perfection in the management of febrile diſeaſes. So ſanguine, indeed, are my expectations, that I cannot eaſily forgive myſelf, when the event of this diſeaſe happens to be

unfortunate. The remitting fever of Jamaica is not a diſeaſe by any means devoid of danger; yet I ſhould not be ſatisfied with myſelf, from the view which I now have of the ſubject, if I loſt one patient in fifty. I own indeed that this is a degree of ſucceſs, which neither I, nor perhaps any other man has yet attained. I muſt however add, that I have not always had the liberty of doing what I wiſhed to do; neither have I always dared to venture upon what I judged not proper to be done. The prejudices of patients in ſome caſes, and the idea of reſponſibility in others, confine us to the beaten track; though we may be conſcious in ourſelves that it never can lead us to our object. If theſe obſtacles were removed, a man who will act with deciſion, may promiſe almoſt any degree of ſucceſs in the remitting fever of the Weſt-Indies, in conſtitutions which are free from habitual complaints.

The conſtant fluctuation which has hitherto prevailed in the opinions of phyſicians concerning the cauſes of fever, and in ther practices with regard to its cure, oblige us to think doubtfully of the real progreſs of the healing art. Hippocrates was allowed to have practiſed with more ſucceſs than his predeceſſors. Aſclepiades was believed by many

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to have been ſtill more fortunate than Hippocrates; yet the road which he purſued was totally different. Galen, who reviewed and improved the ſyſtem of the Coan ſage, roſe to great eminence, and marked out the path of medical practice for many centuries. The doctrines of Paracelſus ſhook his authority; and theſe in their turn gave way to newer modes of thinking. In this manner there have been ſuch perpetual revolutions in the modes of treating febrile diſeaſes, that we can ſcarcely avoid concluding, that little or nothing of the matter is yet known with certainty. Medical writers have wandered from conjecture to conjecture, for more than two thouſand years; and we do not yet perceive any proſpect of theſe conjectures being nearer to an end.

BIBLIOTHECA BODLEIANA

APPENDIX.

CONTAINING SOME HINTS WITH REGARD TO THE MEANS OF PRESERVING THE HEALTH OF SOLDIERS SERVING IN HOT CLIMATES.

HAVING treated pretty fully of the remitting fever of Jamaica, and intermitting fever of America, I ſhall now offer a few thoughts on the various means of preſerving the health of ſoldiers in warm climates; taking the liberty at the ſame time to ſuggeſt ſome ideas, which might perhaps be uſefully attended to by thoſe who ſuperintend the medical eſtabliſhments of the army.

The climate of the Weſt-Indies has been fatal to the European conſtitution, ever ſince its firſt diſcovery by Columbus. To the armies and navies of England it has been particularly deſtructive. The ſad fate of the troops who went on the expedition to Carthagena will be long remembered; neither will the loſs ſuſtained at the Havannah, Martinique and Gaudaloupe ſoon be forgotten; while the

deſtruction, occaſioned by the effects of climate at St. Lucia, St. Juan, and even in Jamaica, during the late war, is ſtill freſh in our memories. As it appears from a comparative view of the mortality of the troops employed in theſe different ſervices, that we have profited but little by the experience of our former misfortunes, it might probably be ſuppoſed, that the great ſickneſs, obſerved on theſe occaſions, has actually ariſen from the irremediable effects of climate, or unavoidable hardſhips of ſervice in hot countries; but there is reaſon to believe that this is not wholly the caſe. I will venture to aſſert, nor ſhould I expect to meet with difficulty in proving, that much of it has proceeded from the inexperience or inattention of thoſe who conducted the expeditions, or from ſuch errors in the medical deapartments as might have been eaſily obviated. It is ſuperfluous to obſerve, that the health of the ſoldier is an object of principal importance in enſuring the ſucceſs of war. We have many inſtances of expeditions apparently well concerted, which have failed from the exceſſive ſickneſs of the troops; and too many proofs of this ſickneſs proceeding from a neglect of ſuch precautions, as might have contributed to the preſervation of health. I have accuſtomed myſelf to look at this

this ſubject for more than fifteen years. I have turned it often in my mind, and cannot diſcover that much judicious attention has yet been paid to it. We cannot often perceive that health has been an object of conſideration, in fixing the permanent ſtations of troops; or that it has been much regarded in chooſing encampments in the field. Exerciſes, which might enure the body to hardſhips, have not been ſufficiently enforced; and ſuch ſorts of diet, and ſuch modes of life, as might obviate the danger of diſeaſes, have been little attended to; while the beſt regulations for a ſpeedy and deciſive plan of cure do not appear to have been adopted. I ſhall be obliged, in tracing this ſubject, to advance ſome ideas which are contrary to the opinions of ſome celebrated authours, which combat popular prejudices, or which interfere with the views of intereſted men. I may be reckoned preſumptuous perhaps in cenſuring freely; but I am conſcious that I do not advance any thing which has not truth for its foundation.

It has frequently been the practice, in times of war, to ſend new raiſed regiments to ſerve in the iſlands of the Weſt-Indies; and tho' the injudiciouſneſs of the practice has long been diſcovered, it does not yet appear to be diſcon-

diſcontinued. During the late war there were ſeveral corps ſent out to thoſe countries newly recruited, the conſequence of which was, that though not a man died by the ſword; yet in the ſhort ſpace of two years, there ſcarcely was a ſoldier left. A great part of this dreadful mortality undoubtedly aroſe from the climate; yet ſome ſhare of it ſeems likewiſe to have proceeded from the particular circumſtances of raw undiſciplined troops. Men newly enliſted in England, are generally of groſs and full habits, and too often accuſtomed to irregular and diſſipated modes of life. Under ſuch circumſtances, a ſudden tranſition to a hotter air, joined with full meals, and the habitual indolence of a paſſage at ſea, cannot fail to produce a plethoric ſtate of the body, which is often rendered dangerous by the incautious uſe of ſtrong liquors, or the ordinary exertions required in performing military exerciſes, under the influence of a powerful ſun. I do not pretend to inſinuate that thoſe are the cauſes of remitting fever, but I am very ſenſible at the ſame time, that they are cauſes which occaſionally aggravate its danger, and which even ſometimes accelerate its appearance. In ſoldiers who have been enured to a military life, ſuch change of climate operates with diminiſhed effect. The bulk of the fluids

uids is perhaps diminiſhed by a continuance f leſs full living; while the tone and elaſti-ty of the moving powers are increaſed by abits of exerciſe and exertion. The diſpo-tion to commit exceſſes is likewiſe repreſſed y the rigour of diſcipline; and the mind ac-uires a philoſophical firmneſs from long ſer-ice, which not only contributes to the pre-ervation of health, but which enables the in-ividual to ſuſtain with fortitude the attack of iſeaſes.

In paſſing from a cold to a hot climate, the rſt thing that occurs to be conſidered, is the ffect produced by the ſimple increaſe of heat n the human frame. Expanſion of the fluids, nd conſequent fulneſs of the veſſels is con-antly obſerved to take place from ſuch a hange, frequently however accompanied with iminiſhed energy of the moving powers, par-icularly where heat is combined with damp-eſs of the air. To obviate therefore this na-ural effect of heat is the firſt general object to e attended to, in tranſporting troops to the ropical climates. The Engliſh, from the con-itution of their bodies, and ſtill more perhaps rom their manner of living, ſuffer more from hoſe ſudden changes than ſome other Euro-ean nations. The French and Spaniards are ot only leſs groſs conſtitutionally, but eat like-wiſe

wiſe leſs animal food, and drink their liquors greatly more diluted, than the natives of England. They do not probably owe more to medical aſſiſtance than the Engliſh; yet they are known to eſcape better from dangerous diſeaſes; and their ſafety I might add has been remarked to bear ſome proportion to the different degrees of abſtemiouſneſs, which they are known to obſerve. An idea prevails with the generality of people, who viſit warmer or more unhealthy climates, that it is neceſſary to eat and drink freely, as a ſecurity againſt the attacks of endemic fevers; but a very narrow obſervation will ſerve to ſhew, that good living, as it is called, has no ſuch effects; and we may even ſoon perceive, unleſs blended by long eſtabliſhed prejudices which flatter our appetites, that it actually is attended with pernicious conſequences. The moſt abſtemious, ſo far as I have obſerved, eſcaped the beſt, not only from the attacks, but particularly from the danger of diſeaſes. With regard to the diet of a ſoldier, ſerving in a hot climate, I ſhould be diſpoſed to believe, that one ſpare meal of animal food would be perfectly ſufficient in twenty-four hours: and if it were eaſy to alter eſtabliſhed cuſtoms, it would be moſt proper, perhaps, that it were made in the cool of the evening.

Coffee,

ffee, or tea for breakfaſt might likewiſe ſubſtituted with advantage in place of the inary allowance of rum: but this I muſt ıfeſs would be a dangerous experiment. ır ſoldiers have been ſo long accuſtomed to ıſider this gratuitous allowance of rum as ir right, that no man could anſwer for the ıſequences of with-holding it. The prac- e certainly is pernicious, and the man, ıo firſt introduced it into the army, did no od ſervice to his country. I do not deny ıt a judicious uſe of ſpirits might be of nefit occaſionally: neither do I pretend to ', that, even the hardeſt drinking can be nſidered as a general cauſe of fevers; but would not be difficult to produce evidence, ıt hard drinking aggravates the violence, d increaſes the danger of the diſeaſe, when happens to take place; while I cannot per- ive much reaſon for concluding, that the e of ſpirituous liquors has ever been pro- ctive of general good to the army, par- ıularly in warm climates. But as I have ſt mentioned, that ſpirituous liquors have tle claim to be conſidered among the num- r of thoſe things, which contribute to the eſervation of health: ſo I may add, with rfect confidence, that the allowance of rum anted to ſoldiers, has done much harm by ruining

ruining diſcipline, and good behaviour. If it is with-held for one day, diſcontent immediately begins to ſhew itſelf among the men. If with-held for any length of time, complaints ſometimes riſe to a ſtate of mutiny, and deſertions become numerous. But beſides this, that ſoldiers ſeldom perform extra-duty with alacrity, unleſs they are bribed with a double allowance of liquor. A double allowance, drank undiluted, as is generally the caſe, is frequently ſufficient to produce ſome degree of intoxication. I need not mention the diſaſters to which an intoxicated army is expoſed. Diſaſters of a very ſerious nature have actually happended from this cauſe, and they might have happened oftener had the enemy been always vigilant, and bold enough to have ſeized the opportunity. A great deal might be ſaid on the ſubject of abſtemiouſneſs. Moderation both in eating and drinking is eſſentially neceſſary to the health of troops newly arrived in hot climates; but a truth ſo obvious need not be enforced by many arguments. The example of the French and Spaniards afford a very convincing one. It is known to every medical perſon, that the fevers of hot climates are generally moſt dangerous in full and plethoric habits. It ought to be an object of attention therefore to obviate

viate this cauſe of mortality, by means of ſpare living, and the cautious uſe of ſtimulating liquors: but ſoldiers have little ſelf command, and ſeldom reſiſt the gratification of their appetites. Hence it becomes the duty of their officers to enforce their compliance with what is proper, and to preclude them, as much as is poſſible, from the means of obtaining what is pernicious: but this requires great vigilance and attention, and often great ſeverity. It is not enough that ſoldiers are obliged to eat in meſſes. The officers ought daily to inſpect their meals, and inflict penalties where they obſerve tranſgreſſions. And further, as it is a matter of much importance to preſerve troops in a ſtate of health fit for action, and as the courſe of fevers is often uncommonly rapid in the Weſt-Indies, it would be proper, perhaps, that the ſurgeon reviewed the men daily. The diſtant approach of the diſeaſe would be frequently diſcovered by this means, and the danger of it might probably be ſometimes averted by timely aſſiſtance. Before men appear in the ſick-reports, the fever is often conſiderably advanced in its progreſs.

Beſides the alterations which might be made in the diet of troops, on their arrival in hot climates, ſome changes in the mode of cloathing

cloathing might, perhaps, be likewiſe adopted for the ſake of eaſe and convenience, if not for purpoſes of real uſe and economy. Round white hats would be the moſt proper covering for the head; and dowlas might be ſubſtituted with advantage in room of the thick cloth, of which the coats of ſoldiers are uſually made. There can be no grounds for ſuppoſing, that a ſoldier will not fight as well in dowlas as in ſcarlet; and there is certain proof that he will perform duties which require exertion, with greater eaſe and effect, as the nature of his cloathing will preſerve him cooler by ſome degrees. But though ſuch alterations may be hinted, there is little room to believe that they will be attended to. In the preſent rage for military ſhew, it will be a difficult taſk to convince men to lay aſide an uniform, which adds ſo much to the brilliancy of the appearance. Much ſtreſs ſeems at preſent to be laid upon the dreſs of the ſoldier, and I do not pretend to argue, that it is a matter of perfect indifference. It has certainly very often had viſible effects upon the enemy; but theſe effects have oftener proceeded from a knowledge of the character of the troops who wore it, than from any thing formidable in the uniform itſelf. But to leave this ſubject of

of dreſs, I ſhall only obſerve, that a flannel or cotton wrapper would be more uſeful to a ſoldier, ſerving in the Weſt-Indies, than a blanket; and perhaps the expence of it would not be much greater. It would ſerve for his covering in the night, and would ſecure him againſt the effects of cold, where occaſions obliged him to go out.

I ſhall endeavour in the next place to point out ſome of thoſe benefits, which may be derived to health, from habits of daily exerciſe. This is an object of the greateſt importance, but unfortunately it is an object very little attended to in the Britiſh army. It appears, indeed, to be little regarded in moſt of the armies of modern Europe. I ſhould incur a charge of preſumption, perhaps of ignorance, did I attempt to point out the exerciſes which are the moſt proper for the forming of ſoldiers. Thoſe only which contribute to the preſervation of health, belong to this place. I may however remark, that the eſſential part of the art of diſciplining troops, conſiſts in imparting ſentiments of heroiſm and virtue to the minds of the men, in improving the exertions of their limbs, and in acquiring knowledge of the correſpondence of their exertions when called into action. If I durſt take ſo great a liberty, I ſhould be inclined to ſay,

that our ordinary exerciſes are flat and inſipid in their nature; that they occaſion no exertions and excite no emulation: they neither improve the active powers of the body, nor inure the ſoldier to bear fatigue and hardſhip. The Romans, who owed more to the diſcipline of their armies than any nation on earth, were extremely rigorous and perſevering in their exerciſes. They practiſed their ſoldiers in every ſpecies of ſervice that might occur; ſo that nothing at any time happened with which they were unacquainted. Actual war was in reality a time of relaxation and amuſement to the ſoldiers of this warlike people, who appear to have been trained for the ſervice of the field, as horſes are for hunting or the courſe. The Romans were not only ſenſible of the advantages which thoſe habits of exerciſe procured them in action; but had alſo the penetration to diſcover, that they were eminently ſerviceable in the preſervation of health. The words of Vegetius are remarkable. "Rei militaris periti, plus quotidiana armorum exercilia ad ſanitatem militum putaverunt prodeſſe, quam medicos." I made the ſame remark during the time that I attended a regiment in America, without knowing that it was ſupported by ſo great authority. I obſerved, when the men were in the

the field, ſometimes even complaining of hardſhip and fatigue, that few were reported in the liſt of the ſick: when removed to quarters, or encamped for any length of time in one place, the hoſpital was obſerved to fill rapidly. This obſervation was uniformly verified, as often as the experiment was repeated.

An idea has been long entertained, that the European conſtitution cannot bear hard labour in the ſun, or perform military exerciſes with ſafety, in the hot climates of the Weſt-Indies. Hence a plan has been ſuggeſted, and in ſome degree I believe adopted, that regiments ſerving in thoſe countries, be furniſhed with people of colour to do the drudgery of the ſoldiers. But this appears to be an innovation which ought to be admitted with extreme caution. It will evidently ſerve to increaſe ſloth and idleneſs, and unleſs the perſons of colour can perform the military duty in the field, their ſervices will go but a ſhort way in preſerving the health of the troops. A ſoldier, notwithſtanding he may have received the King's pay for twenty years or more, remains in ſome degree a tyro till his body has been inured to fatigue, and prepared to bear without danger the effects of the climate, in which he may be deſtined to ſerve. This is a part of the military diſci-

pline, indeed, no leſs neceſſary than a knowledge of the uſe of arms; and though it is a part of it, difficult to be accompliſhed, there is ſtill room to believe, that it may be effected, even in the ſo much dreaded climate of Jamaica. It is a common opinion, that the fatigues of an active campaign in the Weſt-Indies, would be fatal to the health of the troops; but the opinion has been aſſumed without fair trial. The exertions of a ſingle day have often been hurtful. This was frequently the caſe in America, where the ſoldiers had remained for ſome time in a ſtate of reſt; but bad effects from the greateſt exertions, in the hotteſt weather of ſummer, were extremely rare in that country, after the campaign had been continued for a few days. But that I may not ſeem to reſt an opinion of ſo great importance on a bare analogy, I ſhall beg leave to obſerve, that young European planters undergo greater fatigues, and remain daily expoſed for a longer time to the heat of the ſun, than would fall to the lot of ſoldiers in the actual ſervice of the field. I might likewiſe further confirm the opinion, that an Engliſhman is capable of ſuſtaining fatigue in the Weſt-Indies, equally well with the African, or the native of the iſlands, by mentioning a journey which I once performed myſelf.

myſelf. I lived about four years in Jamaica, during the greateſt part of which I believed that death, or dangerous ſickneſs, would be the conſequence of walking any diſtance on foot; but I afterwards learnt that this apprehenſion was vain. I left Savanna la Mar in the year 1778, with the deſign of going to America; but having embarked in a hurry, and forgot a material piece of buſineſs, I found a neceſſity of being put aſhore, after having been two or three days at ſea. I was landed at Port Morant, in St. Thomas's in the Eaſt, from which I went to Kingſton by water, where learning that there was a veſſel at Lucca, in the Weſtern extremity of the iſland, nearly ready to ſail for New-York, I ſet out directly, that I might not loſe the opportunity of a paſſage. My finances not being in a condition to furniſh horſes, I left Kingſton on foot, about twelve o'clock, and accompliſhed a journey before it was dark of eighteen miles. I did not find I was materially fatigued, and ſtill perſiſting in my reſolution, travelled a hundred miles more in the ſpace of the three following days. It may not be improper to remark, that I carried baggage with me, equal in weight to the common knapſack of a ſoldier. I do not know that ſo great a journey was ever performed on foot by an European, in

any of the iſlands of the Weſt-Indies; not ſo much I am convinced from inability, as from idea that ſuch exertions are dangerous. But as it appears from the above fact, that the European conſtitution is capable of ſuſtaining common military fatigues in the climate of Jamaica; ſo I may add that it ought to be a principal object of military diſcipline, that ſoldiers be practiſed with frequent marching, and the performance of other exerciſes of exertion, if it is actually meant that they ſhould be uſeful in times of war. The fate of battles, I might obſerve, depends oftener on rapid movements, in which the activity of the limbs is concerned, than on the expert handling of arms, which is acquired by the practice of the manual. I obſerved formerly, that abſtemiouſneſs and temperance were among the beſt means of preſerving health, or obviating the danger of the diſeaſes to which troops are liable on their firſt arrival in hot climates; but the rules of temperance are little regarded by Engliſh ſoldiers at any time, and almoſt conſtantly tranſgreſſed wherever extraordinary labour is required of them. To ſuch cauſes of exceſs, joined with the great heat of the ſun, we may perhaps impute many of the bad effects of marching, or of moderate fatigue in the Weſt-Indies. In the journey

ney which I have juſt now mentioned, I probably owe my eſcape from ſickneſs to temperance and ſpare living. I breakfaſted on tea about ten in the morning, and made a meal of bread and ſallad, after I had taken up my lodging for the night. If I had occaſion to drink through the day, water or lemonade was my beverage. In the year 1782, I walked between Edinburgh and London in eleven days and a half; and invariably obſerved, that I performed my journey with greater eaſe and pleaſure, where I drank water, and only breakfaſted and ſupped, than when I made three meals a day, and drank wine, ale, or porter. In the following ſummer I carried the experiment farther. During the months of July and Auguſt, I travelled in ſome of the hotteſt provinces of France. I generally walked from twenty-five to thirty miles a day, in a degree of heat leſs ſupportable than the common heat of Jamaica, without ſuffering any material inconvenience. I breakfaſted about ten o'clock on tea, coffee or ſyrup of vinegar, made a ſlender meal of animal food in the evening, with a great proportion of ſallad and vegetables; but never drank the weakeſt wines without dilution. The great refreſhment which I found from ſyrup of vinegar and water, convinces me, that the

Romans had good cauſe for making vinegar ſuch an eſſential article among the proviſions of their armies.---The ſtate of luxury and our depraved appetites, unfortunately do not ſuffer it to be adopted by the Engliſh. I ought perhaps to make an apology to the reader for introducing my own experience on the preſent occaſion: but I muſt add, that I have only done it, becauſe it enables me to ſpeak from conviction, that an Engliſh ſoldier may be rendered capable of going through the ſevereſt military ſervice in the hotteſt iſlands of the Weſt-Indies, and that temperance will be one of the beſt means of enabling him to perform his duty with ſafety and effect.

I mentioned before, that the military exerciſe of the Engliſh army is ill calculated to excite a ſpirit of emulation among the men. It is in fact conſidered only as a piece of drudgery, in which there are few who have any ambition to excel. It has little effect in improving the activity of the limbs, or hardening the conſtitution of the body; ſo that it may better ſuſtain hardſhip and fatigue. But feeble as its effects are in the view of increaſing exertion, or preſerving health, it is generally almoſt intirely diſcontinued when troops arrive in hot climates; a practice, which

which has ariſen from a ſuperficial and miſtaken view of the ſubject. Sloth and indolence are the bane of a ſoldier in every climate; exerciſe and action are the greateſt preſervatives of diſcipline and of health. It would be reckoned preſumption in me, and it does not belong to this place to point out thoſe exerciſes which might be proper for the forming of ſoldiers. But every one knows that walking, running, wreſtling, leaping, fencing and ſwimming, are often called into actual uſe in the practice of war. Theſe are ſuch exerciſes likewiſe as excite emulation, and are practiſed with pleaſure by the individual. They harden the body, increaſe the powers of the limbs; and by furniſhing the officer with a view of the different degrees of activity, may often enable him to place his men in the ranks, according to the uniformity of their exertions; a more uſeful mode of arrangement in time of action, than uniformity of exterior form. I may add in this place, that ſea-bathing will be extremely uſeful in moſt caſes, in increaſing the vigour and preſerving the health of ſoldiers ſerving in warm climates. There no doubt will occur many caſes, in which it is improper; but in general it may be employed with great benefit. I chiefly impute it to this cauſe, that

that I did not experience a ſingle day's indiſpoſition, during the four years that I lived in Jamaica.

It has been known for many ages, that the cauſe of intermitting and remitting fevers, the moſt formidable diſeaſes of hot climates, owes its origin to exhalations from ſwampy and moiſt grounds. It often happens likewiſe, that thoſe low and ſwampy grounds are the moſt acceſſible parts of a coaſt, or that towns and ſettlements have been placed near them;--to attack or defend which falls to the lot of the ſoldier. It not being therefore in the power of a military commander to remove the natural diſadvantages, which I have mentioned; it is only in his power to ſhew his judgement and attention, by applying the beſt remedies to obviate their effects. It is certainly an object of the utmoſt conſequence to preſerve troops in a ſtate of health fit for action: and no perſon will deny, that every care ought to be employed in chooſing the beſt ſituations for quarters, or even temporary encampments, that the nature of the duty will permit. We learn from experience that fevers are little known in rough and hilly countries, where water flows with a rapid courſe; while we likewiſe know, that they are common in low and champaigne countries, where

e water ſtagnates, or has only a ſluggiſh
on: independent of which, thoſe ſitua-
which are in the neighbourhood of
aps, or near the oozy banks of large
s, have always been obſerved to be par-
arly liable to ſuch diſeaſes. If therefore
circumſtances of the ſervice do not for-
no room can be left to doubt about the
riety of ſtationing troops in the mounta-
or hilly parts of a country; while I may
wiſe add, that where neceſſity confines
n the plain, the ſea ſhore will in ge-
l be found to be the moſt eligible. But
les the above general character of local
itions, there are likewiſe ſome ſubordi-
circumſtances, which deſerve to be par-
larly attended to in chooſing the ground
ncampments. It is very commonly be-
ed, that high and elevated ſituations are
moſt uniformly proper for this purpoſe;
this in fact is not, by any means, a general
. A high and dry ſituation does not con-
any thing hurtful in itſelf: but it is more
n others expoſed to the effluvia which are
ried from a diſtance. It is the peculiar
ure of exhalations to aſcend as they pro-
d from their ſource; in confirmation of
ich truth I have had ſeveral opportunities
witneſſing, that this cauſe of diſeaſe was
carried

carried to riſing grounds in a ſtate of great activity; while it apparently paſſed over the plain or vallies which lay contiguous, without producing any material effects. From the knowledge of this fact we are furniſhed with this obvious remark, that it will be proper to interpoſe woods or riſing grounds to the progreſs of thoſe noxious vapours; or where ſuch natural advantages do not exiſt, it might be ſerviceable to burn a chain of fires in a temporary encampment, or even to raiſe a parapet wall to over top the barracks, where neceſſity requires a more permament ſtation. ---It would be a matter of utility, could we determine with any certainty to what diſtance from its ſource, the noxious effluvia extend; but this is a queſtion which we cannot hope to aſcertain very exactly. It is not uniformly the ſame in all ſituations, depending on the concentrated ſtate of the exhalation at its ſource, the obſtacles it meets with in its progreſs, and the nature of the ground over which it paſſes, or to which it is directed. I have known its influence very remarkable at the diſtance of a mile and a half, on the top of a hill of very conſiderable elevation.

The conveniencies of trade have often tempted coloniſts to place their towns on the banks of rivers, without regard to the healthfulneſs

fulneſs of the ſituation. The choice of ſuch ſpots, injudicious as it evidently is, has been greatly approved of, and warmly recommended as preferable to others for the encampment of troops, by a very celebrated medical authority. Sir John Pringle conſiders the banks of large rivers as extremely proper for this purpoſe, on account of a free circulation of air; but I am ſorry to obſerve, that Sir John Pringle's opinion on this occaſion appears to have ariſen from his theory, rather than that his theory has ariſen from obſervation. We have actual experience of the unhealthfulneſs of the muddy banks of large rivers in hot climates; and we have little cauſe to dread diſeaſes, which originate from confined air in America, the Weſt-Indies, or perhaps in any country where troops are employed in the field.

I have juſt now obſerved, that the banks of large rivers, in the opinion of Sir John Pringle, afford the moſt eligible ſituation with reſpect to healthineſs for the encampment of troops. I may add, that the ſame authour has likewiſe recommended open grounds for this purpoſe, in preference to woods; and that the ſame favourite idea, viz. a free circulation of air, has influenced his advice. I will not contend, that open, dry and cultivated

ted grounds may not be preferable to grounds covered with wood, where the heat of the climate is moderate; but I have no doubt in aſſerting, that encampments on lands, the woods of which have been newly cut down, as is generally the caſe in times of war, are of all others the moſt unhealthful. I have myſelf ſeen ſeveral examples of it. Perhaps it is in a great meaſure owing to this cauſe, that new countries are generally ſo fatal to the firſt ſettlers; as alſo, that troops ſuffer ſo remarkably in carrying on the ſieges of places which are ſurrounded by woods: it being conſtantly obſerved, that effluvia from moiſt lands, when firſt expoſed to the action of a powerful ſun, are always highly pernicious. The Romans, whoſe obſervations on ſubjects which relate to war, may be oppoſed with confidence to the authority of the moſt celebrated moderns, were fully ſenſible of the advantages of encamping under the ſhelter of wood. We learn from Vegetius, that their armies reſorted to the cover of a wood, not leſs carefully, than that they avoided the vicinity of ſwamps or marſhes. There are in reality various circumſtances, which contribute to render ſuch ſituations both healthy and agreeable. If troops are encamped in the body of a wood, the noxious effluvia, which may be carried by the

e winds from neighbouring ſwamps, are opt in their progreſs; the lofty ſhade of the ees preſerves the air cool and more refreſh- g than the atmoſphere of the open country; hile we know from experience, that moiſt id ſwampy lands do not ſend forth their oxious vapours, in any remarkable degree, nleſs where they are acted upon by the heat f a powerful ſun.

I ſhall only further obſerve, with regard to he cauſe of intermitting and remitting fevers, hat a ſpace of time almoſt conſtantly inter- enes between expoſure to the noxious ef- luvia, and the ſubſequent appearance of the iſeaſe. It is not indeed uniformly the ſame n all caſes, appearing to depend not only on he concentrated ſtate in which the exhalation s applied to the body; but on the general ap- itude of the individual, and the various oc- afional or exciting cauſes, which facilitate or eſiſt its operation. It was in a few inſtances nly, that I ſaw the diſeaſe appear before the eventh day. It was oftener the fourteenth, wentieth, or even longer. Upon the whole may remark, that ſeptenary periods has a onſiderable power in influencing the time of ts appearance.

Having offered a few obſervations in the preceding pages, on the diet, exerciſes and choice

choice of the quarters or encampments for troops in hot climates; I ſhall now add a few hints reſpecting medical care and management. It will probably be ſuppoſed, that no attention with reſpect to this ſubject has been omitted. Regiments are provided with ſurgeons, and armies have always been furniſhed with ample hoſpital eſtabliſhments. But this perhaps is not enough. It is neceſſary that the duties of theſe ſtations be well executed, as well as well deſigned. The office of ſurgeon to a regiment is an office of truſt and of primary importance; the appointment to it, however, does not ſeem in general to be ſufficiently attended to. The ſurgeoncies of regiments, till lately, were allowed to be bought and ſold; in conſequence of which abuſe, little other qualification, perhaps, came to be required, than the command of the purchaſe money. Thus it often happened, that young men, who had attended a courſe of anatomical lectures, or walked the rounds of an hoſpital for a few months, came at once to be entruſted with the care of the lives of ſix or ſeven hundred ſoldiers, who, as they are raiſed and maintained at a great expence, deſerve, on the ſcore of economy, independent of every other conſideration, to be well taken care of. It would be ſuperfluous to uſe any argu-

arguments to prove the prodigality of committing the care of a regiment to men, who have not had profeſſional experience in any country, and who are totally unacquainted with the diſeaſes of the countries to which they are frequently ſent. If we are diſpoſed to believe that there is any thing in medical treatment, we can ſcarcely avoid making the concluſion, that many lives are loſt from this cauſe. It muſt not be underſtood, that I mean any thing direſpectful to the ſurgeons of the army, by this inſinuation. I know that a regiment is an excellent ſchool for medical knowledge; and that the beſt practitioners have occaſionally appeared in the army; but I wiſh ſtrongly to inculcate the propriety of obliging candidates for this office, to produce evidence of their qualifications, before they are admitted to ſuch an important truſt. It is not enough, that a young man, who offers himſelf to take charge of the health of a regiment, ſhould know to perform an operation with dexterity. Handling a knife in reality is the leaſt part of a regimental ſurgeon's duty. The office of phyſician is his daily employment, to execute which properly, both years and experience are required. It certainly ought therefore to be an object of concern with thoſe who are entruſted with the office of ſuperin-

tending the medical appointments of the army, that the candidates for ſurgeoncies be obliged to ſubmit to ſuch trials, as may in ſome degree afford proofs of their abilities. It would be a proper regulation, perhaps, that no man be permitted to propoſe himſelf for the ſurgeoncy of a regiment, before he has arrived at ſuch an age, as may have furniſhed him with general experience; and further, that he give teſtimony of actual abilities by the treatment of diſeaſes in an hoſpital, under the inſpection of an able phyſician, to whom the duty will be preſcribed to examine the mode of practice with rigour. A trial of this ſort might be better truſted to than the recommendatory letter of a profeſſor; or even the diploma of Oxford or Edinburgh. There is not any thing chimerical in the propoſal. Nothing in ſhort is more practicable; but it is ſcarcely to be expected, that men of talents and education will give themſelves ſo much trouble, that they may be admitted into a ſervice which holds out few advantages. The ſalary of regimental ſurgeons is ſmall; and it is perhaps no paradox to ſay, that this is a cauſe of great expence to the nation. The bare ſubſiſtence, which the ſervice affords, furniſhes no inducement for men of abilities to enter, at leaſt to remain any length of time in the army, which unfortunately has been

been conſidered in no other light, than as a place, where ſurgeons may paſs their noviciate; but which they are generally diſpoſed to leave, as ſoon as they are qualified to execute the duty properly. Medical knowledge is gained only by experience; but independent of medical knowledge, an acquaintance with the habits, characters and diſpoſitions of ſoldiers is a matter of ſo great importance, that old ſurgeons, even of inferior abilities as medical men, have generally been obſerved to have a proportionably ſmall liſt of ſick in their reſpective corps. The qualities that are principally required in a regimental ſurgeon, excluſive of medical learning and knowledge, are acuteneſs in diſcerning the characters and diſpoſitions of men, and above all, boldneſs and diciſion in the application of remedies. Life is often loſt in unhealthy climates, by the dilatorineſs and timidity of common practice.

Having mentioned juſt now, that there appears to be a remiſſineſs in examining the qualifications that are requiſite for the office of regimental ſurgeon, I might perhaps, with equal juſtice, extend the remark to the appointments in the general hoſpital. The power of appointing phyſicians or ſurgeons in the hoſpital, has generally been lodged with the commanders in chief, and I might ſay, without

tranſgreſſing the bounds of truth, that merit has not always been the beſt claim for promotion. It would be invidious to be more particular in cenſuring what is paſſed. It is only hoped, that the ſubject will be enquired into, and ſuch remedies applied, as will preclude ſimilar abuſes in future. The general hoſpital has ever been a heavy article in the expences of war; and if it were fair to form an opinion of the whole, from the part which I have ſeen, I ſhould not heſitate in declaring, that the eſtabliſhment is in a great meaſure ſuperfluous. I have no doubt, in obtaining the ſuffrages of people of experience, that general hoſpitals are ruinous to military diſcipline; that they promote ſloth and indolence, the worſt diſeaſe to which a ſoldier is liable, and that they extinguiſh very ſpeedily the ardour for the ſervice of the field. There is in fact no exaggeration in the aſſertion, that the man, who has ſpent two or three months in a general hoſpital, is leſs of a ſoldier than when he was firſt recruited. It is only I may add by habits of exerciſe, even by toils and fatigue, that men at laſt attain the properties of good ſoldiers; while it is only by conſtant practice of ſuch diſcipline, that they are preſerved in a ſtate fit for the performance of their duties. Theſe active qualities are ſpeedily extinguiſhed by the habits of

of ſloth and indolence, which prevail in general hoſpitals; but beſides this, it is likewiſe certain, that cures are often there protracted to months, which might have been accompliſhed in the courſe of a few days, if circumſtances would have permitted the men to remain with their regiments. Regimental ſurgeons have many inducements to exert themſelves in reſtoring their men ſpeedily to health, which act only with feeble power on thoſe who have the management of general hoſpitals. The former likewiſe poſſeſs ſome advantages, of which the latter are deſtitute. They know the habit and diſpoſitions of the patient; they ſee the diſeaſe in its firſt beginnings, and are enabled to ſeize the moſt favourable moments for acting with deciſion. The above are conſiderations, which ought to make us backward in removing ſick ſoldiers to general hoſpitals; I may add, that ſuch is the nature of military diſeaſes, that there does not, perhaps, occur one caſe in twenty, which might not be treated properly by the ſurgeon of the regiment, if attention, and a very little expence were beſtowed in providing neceſſary accommodation. But beſides that, the diſeaſes of ſoldiers are ſeldom of ſuch a kind, that they might not be treated properly by regimental ſurgeons, if government were at the expence of

of ſupplying a few conveniencies. I may farther obſerve, that together with the indolence naturally attached to general hoſpitals, and uniformly hurtful to military diſcipline, there is often actual danger to life, by removing men in critical ſituations, or by the neceſſary intermiſſion of medical aſſiſtance, where continual and vigorous exertions are required. The diſeaſes of hot climates, particularly the fevers of the Weſt-Indies, are often moſt acute and rapid in their courſe. The ſurgeon of a regiment perceives the approach of danger, and, ſenſible that his ſituation does not enable him to do juſtice to his patient, determines to remove him to the general hoſpital. But time is loſt before this can be accompliſhed. It is ſeldom that any thing is done after it is deemed proper to ſend a ſick man away; neither does it commonly happen, that any thing material is attempted on the day on which he is received. Thus one day at leaſt, ſometimes two are completely loſt in caſes, where every moment is of conſequence. Time is precious in the fevers of hot climates; and the deciſion or neglect of an hour often determines the fate of a patient.

It is an obſervation, which cannot fail of having frequently occurred to people who have ſerved any time in the army, that it would be

a very

a very great advantage to the ſervice, if ſick ſoldiers could always be taken care of by the reſpective ſurgeons of the regiment. I have endeavoured to ſhew, that the plan is practicable and eaſy; and I may further add, that the expence neceſſary for ſuch an arrangement, would not amount to one third of what is uſually ſpent in general hoſpital eſtabliſhments. If this idea were adopted, nothing more would be required, than that proper lodgings, proper proviſions, and a ſufficient ſupply of medicines, were furniſhed for the ſick; that the ſurgeon of the regiment be well qualified for his ſtation; and that an inſpector be appointed for a certain portion of troops, to take care that the duty be well and diligently executed. By this means a general hoſpital, as far as regards medical treatment, might be aboliſhed, or at leaſt greatly abridged. Where fighting was expected, extra-ſurgical aſſiſtance would ſtill be neceſſary. Such an inſpection of regimental hoſpitals, as that I have mentioned, ſeems to be perfectly ſufficient for the care of the health of an army, in ordinary occaſions. The greateſt precautions, however, ought to be taken, that the inſpection does not degenerate into a nominal duty. The inſpector ought to viſit the different quarters, examine minutely into every article

article of the management of the hoſpitals, and order that general reports be publiſhed annually; and that ſome mark of approbation be beſtowed upon thoſe ſurgeons, who appear to have executed their duty with the greateſt diligence and ability. It ought to be a concern of government, however, that no perſon be appointed to inſpect regimental hoſpitals, who is not well acquainted with the diſeaſes of the climate, in which the troops happen to ſerve.

NOTES.

CHAP. I.

(1) WE learn from the writings of Hippocrates, that their author was not only well acquainted with the iſlands of the Archipelago, but that he had likewiſe ſpent a conſiderable part of his time in Thrace, Theſſaly, and the adjoining countries. There is reaſon to believe, likewiſe, that he had perſonally viſited the barbarous nations, who, at that time, lived on the borders of the Euxine ſea: and if we can give credit to Abulpharage, an Arabian writer, who has preſerved many curious anecdotes of the great men of former ages, we muſt believe Hippocrates to have been for a long time reſi-

dant in the interior parts of Syria. The words are remarkable:

هذا كان يسكن مدينة حمص و يتردد
الي مدينة دمشق و ياوي الي بستان
كان له فيها و مكانه معروف لي يومنا
هذا في واد هناك يسمي النيرب

He dwelt in the city of Hems or Emeſſa, and paying frequent viſits to the city of Damaſcus, reſided in a garden at that place, in the valley Alnirab, where his abode is known at the preſent time: viz. about the middle of the thirteenth century.

(2) Galen after mentioning the travels of Hippocrates, ſays, ἵν' ουν κριναι τη πειρα τα εκ λογου διδαχθεντα, χρη παντως αυτον τωλεως γενεσθαι αυτοπτην της προς μεσημβριαν τετραμμενης, και της προς αρκτον, και της προς ἥλιον ανισχοντα και της δυσμας. ιδειν δε και την εν κοιλῳ κειμενην και την εφ' ὑψηλῳ, και την επ' ακταις ὕδασι χρωμενην, και την πηγαιοις, και την ομβριοις, και την εκ λιμνων και ποταμων, &c. Tom. I. p. 9. edit. Baſil.

(3) Sylvius de le Boe, Lanciſi, and particularly Sir John Pringle, are the authors who principally inſiſt on the noxious qualities of exhalations from water, which has an admixture of ſalt in it.

CHAP.

CHAP. II.

(1) The word τυπος does not appear to be of great antiquity. It is not found in the writings of Hippocrates, nor even of Celſus. We are uncertain as to the exact time when it firſt made its appearance; though it is probable it was not long before the reign of Antoninus that it came into general uſe. Περιοδος is the term commonly employed by the ancients, to expreſs the revolutions of the diſeaſe. We are obliged to Galen for the definition of that term, as alſo for the definition of τυπος. Τυπος εϛι ταξις επι τασεως, και ανεσεως, περιοδος δε εϛι χρονος επι τασεως και ανεσεως εν νοσημασι γενομενοις. —Περι τυπων. Tom. III. p. 470.

(2) The following is the deſcription of the Semitertian of Hoffman.—Accedit hæc plerumque ante meridiem, cum frigore et horrore gravi, pulſuque contracto. Succedit poſtea cum pulſuum frequentia calor aliquot horarum, ſudore erumpente tepeſcens, non tamen penitus intermittens. Intenditur potius, poſt refrigerationem lenem, circa noctem æſtus, cum pulſuum celeritate, et poſtero die lenior perſtitit, ſine ſiti, donec veſperi, præcedente leviori horripilatione, denuo ingraveſcit. Tertio autem die horror iterum impetit, cum intenſione caloris, eademque, ac primo die, ratione decurrit. Tom. II. c. v.

(3) Ὁ δε τροπος, ἥμι τριταιος, την μιην κουφοτερον, τη δ'ετερη επιπαροξονομενοι, και το ολον επι το οξυτερον επιδιδοντες. Hip. oper. p. 940, edit. Fœſian. From ſuch general language it is impoſſible to ſpeak with certainty: the definition ſeems to be capable of being applied to ſome kinds of the double tertian no leſs properly than to the Semitertian of Hoffman.

(4) Alterum longe perniciofius, quod tertio quidem die revertitur, ex octo autem et quadraginta horis fere ſex et triginta per acceſſionem occupat, interdum etiam vel minus vel plus, neque ex toto in remiſſione deſiſtit; ſed tantum levius eſt. Celſ. lib. III. c. iii. Yet this author does not ſeem to have been ignorant of the complicated nature of this form of diſeaſe. Habet enim plerumque frequentiores acceſſiones deceſſioneſque, et aliud morbi genus videri poſſit, porrigiturque febris in horas viginti quatuor et triginta ſex; ut quod idem eſt, non idem eſſe videatur. Ibid. c. viii. Κατα ταυτο μοι δοκει και ὁ Αγαθινος απαντας τους παρεκτεινοντας τριταιους ἡμιτριταιους ονομαζειν. Galen. oper. Tom. III. p. 335, and in the following page he adds more particularly; Αγαθινος δ'αντικρυς ὡμολογησε του αυτου γενους ειναι τω τριταιω τον ἡμιτριταιον, εν μεγεθει μονω του παροξυσμου διαφορην ισχοντα.

(5) Μιχθεντος του σηπομενου φλεγματος, εφ' ὡ τον καθ' εκαςην ἡμεραν παροξυνομενον ελεγομεν συνιστασθαι πυρετον, τω πικροχολω χυμω, τω δια τριτης εργαζομενω, συνθετος τε και διπλη γιγνοντ' αν τε αἰτια και ἡ διαθεσις, ὁ μεν γαρ ετερος των χυμων καθ' εκαστην

ἡμεραν

ἡμεραν επιφερει τον παροξυσμον, ὁ δ'ετερος δια τριτης, ὡς τε την μεν ετεραν των ἡμερων δυο εχειν παροξυσμους, ἑνα δε την ετεραν ὁταν γε μη συμπιπτωσιν εγγυς ταις ὡρχις ci παροξυντικοι καιροι, συμπιπτον των γαρ εἰς εσται συγκεχυμενος, ουτε τηνδια τριτης, ουτε της καθ' εκαστην ἡμεραν ακριβη διαφυλαττων ιδεαν, &c. Tom. III. p. 333.

(6) Galeni. oper. Tom. III. p. 333.

ان شطر الغب هي حمي مركبه من
حماتين احدهما غب و الاخري بلغميه
فيكون في يوم واحد نوبه للغب و للبلغميه
معا اما علي سبيل للمشابكه و للتوافي
و اما علي سبيل للمبادله و للجوار و اما
علي سبيل للمدخله و للطرو

i. e. The Semitertian is a form of diſeaſe compounded of two fevers, the one of which is ſingle tertian, the other phlegmatic. Hence there happens on one, viz. on the alternate days, both a tertian and quotidian paroxyſm; but the appearances vary according as the fits mix with each other, and croud together; as they change, or approach near to each other; as they actually enter into one another; or as a greater interval is preſerved between them. Tom. II. p. 39. edit. Medic. In the following chapter he is ſtill more explicit:

اخص علاماتها و اولها و ان كان لا بد من
قراين اخري هو ان تكون مدة للحمي
في احد اليومين اطول من مدة الغب
و اسكن ثم يكون اليوم الاخر اخف نوبه
و اقل اعراضا و قد تتكرر فيها القشعريرة
في اكثر الامر مرارا اما يعرض من تصارع
المادتين او لدخول احديهما علي الاخري
و ربما وقع هذا التكرير ثلث مرات و قد
تسخن اعضا ما و القشعريرة ثابته بعد

i. e. The firſt and eſſential ſign, though others are neceſſarily joined with it, is, that the duration of fever in one of the days be longer than the uſual duration of a tertian, and at the ſame time leſs violent; and further, that in the other day the paroxyſms be ſlighter, and the ſymptoms leſs alarming. It happens frequently, moreover, that ſhiverings are obſerved repeatedly in the courſe of this diſeaſe; an appearance which proceeds from the conflict of two different humours, or from their communication and junction with one another. Theſe appearances are often renewed three different times in the courſe of forty-eight hours; the limbs becoming in ſome degree hot while the horror remains, or again returns. He adds afterwards,

فان اليوم الثالث من ايامها يشبه الاول
والرابع الثاني

i. e.

i. e. The third day is like the firſt, and the fourth like the ſecond.

(8) Tom. II. f. ii. cap. IV.

(9) Diſeaſes of Minorca, chap. iii p. 156.

مما يعرض اذاكانت هذة الحميات غبا
خالصه ان تسرع نوابيها الي القصر حتي
يتلا شي الضعف منها اولا

Tom. II. p. 39. i. e. It ſometimes happens, when theſe fevers are pure tertian, that the paroxyſms anticipate, or return in a ſhorter ſpace of time; ſo that a diſeaſe now ariſes more complicated in its nature, than it was in its firſt beginning.

(11) Περι δια φορας πυρετων—περι τυπων, &c.

(12) فصل في احوال الحميات المركبه
On the complication of fevers. Tom. II. p. 39.

(13) This obſervation appears to have been known to Galen. Και τουπιπαν ὁ παροξυσμος προεισβαλλει της συνηθους ὡρας. Tom. III. p. 413; and he ſtill farther adds in the following page; Ει μεν γαρ επειγοιντο και προλαμβανοιεν αιει της συνηθους ωρας, και σφοδροτεροι γινοιντο πολλῳ, και δια τρι της απαιτωεν εν ταχει κριθησεσθαι δηλουσι.

(14) Καιτοι καλα την πρωτην ευχυς αρχην του πυρετου πολλακις ὑπερ ολης απεφηναμεν αυτης φυσεως, η τρεπεται

τριταιον επτων ειναι τον εισβαλλειν τουτον καυρεστον, η τεταρταιον, η αμφημερινον, η τουτων μεν ουδενα, συνεχη δε τινα και οξυν, ουκ αν ὑπερβαλλοντα την τεταρτην ἡμεραν. Tom. III. p. 434.

(15) But though the rules delivered by Galen ſeem to have originated in a great meaſure from theory, they ſtill deſerve to be carefully examined. Thoſe which relate to the ſingle Tertian, are in general well founded. Τον μεν δη μετα σφοδρου του ριγους αρξαμενον εικος μαλλον τριταιον, ἡ των αλλων τινα ειναι πυρετων—τα δ' αλλα γνωρισματα τοτε της θερμασιας εξι ποιον και ποσον, και ἡ των αρτηριων κινησις αυτο τε του ριγους το ειδος αισθανομενου—την μεν γαρ θερμασιαν, πολλην και δριμειαν ειναι χρη, τους δε σφυγμους, μεγαλους και θερμους, και σφοδρους, και ταχεις και πυκνους, και χωρις πασης ανωμαλιας, πλην της πυρετικης, το δε ριγος οἱον νυττομενου του χρωτος, ὡς ὑπο τινος οξεος μαλλον η ψυχρον, των εν τεταρταιοις τε και αμφημερινοις ψυχρου του ριγους αισθανομενων.—ει δε τουτων απαντων ὑπαρχοντων, ἡ των μεγιστων τε και επικαιροτατα των, δειλος τε αυτους εχει σφοδρον, εμετος τε χολης, ἡ ιδρωτος επιγενηται, ἡ αμφοτερα, νυν μεν αν και σαφως επι δηλος.—Προς Γλαυκ. Tom. IV. p. 200.—Similar ſigns are likewiſe mentioned in the Second Book, περι κρισεων. Tom. III. p. 406.

(16) I did not know 'till lately that this circumſtance of connection between the hour of invaſion and the future type of the diſeaſe had ever been taken notice of. I find now, however, that Savanarola de febribus, c. iv. rub. 1. p. 31. edit. Lugdun, Sennertus de feb, lib. ii.

c. 19, Foreſtus, lib. 3. obſerv. 25, and Stahl de febre petechyzante opuſcul. chym. phyſic. medic. p. 626; have all of them made ſimilar obſervations. The manner, indeed, in which the followers of the humoral pathology have attempted to account for this curious fact, is by no means ſatisfactory; but the caſes related by Foreſtus and Stahl are accurate and diſtinct: and, from all the experience which I have as yet had, I am diſpoſed to agree to the opinion, that fevers, not only with quotidian exacerbations, but even thoſe of more continued forms generally begin in the afternoon or evening.

CHAP. III.

(1) This obſervation is found in the firſt book of the Epidemics, and the eighth ſection. Εκ δε των ὑποςροφεων εν τησι αυτῃσι περιοδοισιν εκρινοντο.

(2) I ſhall tranſcribe the ſubſtance of the doctrines of Hippocrates, on the ſubject of critical days, for the benefit of thoſe readers who may not be poſſeſſed of the works of this author.—οἱ και πυρετοὶ κρινονταὶ εν τησι αυτεησιν ἡμερησιν τον αριθμον, εξῶν τε περιγινονται οἱ ανθρωποι, και εξῶν απολλυνται. οἵτε γαρ ευηθεςατοι των πυρετων, και επι σημειων ασφαλεςα των βεβωτες τεταρταιοι παυονταιὴ προσθεν, οἵτε δε κακοη θεςατοι και επι σημειων δεινοτατων γινομενοι τεταρταιοι κτεινουσιν ἡ προσθεν, ἡ μεν ουν πρωτη εφοδος αυτεων οὕτω τελευτα. ἡ δε δευτερα εις την εβδομην περιαγεται. ἡ δε τριτη ες την ενδεκατην. ἡ δε τεταρτη ες την τεσσαρες καὶ δεκατην. ἡ δε πεμπτη, ες την επτα και δεκατην. ἡ δε ἑκτη, ες την εικοςην, αὗται μεν ουν εκ των οξυτατων νοσηματων δια τεσσαρων ες τας εικοσιν, εκ προσθεσιος τελευτωσιν. Progn. p. 44. The above ſeems to be the beſt digeſted form of the doctrine of Hippocrates; yet in other parts of thoſe works which uſually bear the name of that author, ſome differencies may be remarked, which deſerve to be taken notice of. Κρινονται δε αἱ πυρετοι, τεταρταιοι, εβδομαιοι, ενδεκαταιοι, τεσσαρες και δεκαταιοι, επτα και δεκαταιοι, και εικοστῃ προς τῃ μιῃ. De dieb. jud. p. 58. In the

the aphoriſms likewiſe, Ἱδρῶτες πυρέλκουσιν ἢν ἀρξωνται, ἀγαθοὶ τριταῖοι, καὶ πεμπταῖοι, καὶ ἑβδομαῖοι, καὶ ἐνναταῖοι, καὶ ἑνδεκαταῖοι, καὶ τεσσαρες καὶ δεκατεταῖοι, καὶ ἑπτα καὶ δεκατεταῖοι, καὶ μιὴ καὶ εἰκοστὴ, καὶ ἑβδομὴ καὶ εἰκοστὴ καὶ τριακοστὴ πρωὶὴ καὶ τριακοστὴ τελρὶὴ οὗτοι γαρ ἱδρῶτες νοσους κρινουσιν. Sect. IV. p. 1250. The above diſagreement which I have pointed out in the order of the critical days, is too circumſtantial to be referred (as Dr. Cullen would have it) to accidental error in the original manuſcript. It furniſhes, at leaſt, a probable argument, that the prognoſtics, the aphoriſms and the treatiſe on critical days, have not proceeded from the ſame pen.

(3) We are obliged to Celſus for mentioning the opinion, and recording the arguments of Aſclepiades on this ſubject. Id Aſclepiades jure ut vanum repudiavit; neque in ullo die, quia par imparve eſſet, ægris vel majus vel minus periculum eſſe dixit. Interdum enim pejores dies pares fiunt; et opportunius poſt febrium acceſſiones cibus datur. Nonnunquam etiam in ipſo morbo, dierum ratio mutatur; ſitque gravior, qui remiſſior eſſe conſueverat. Atque ipſe quartus decimus par eſt, in quo eſſe magnam vim antiqui ſatebantur. Qui cum octavum primi naturam habere contenderent, ut ab eo ſecundus ſeptenarius inciperet, ſibi ipſi repugnabant, non octavum neque decimum, neque duodecimum diem ſumendo, quaſi potentiorem: plus enim tribuebant nono, et undecimo. Quod cum feciſſent ſine ulla probabili ratione, ab

undecimo, non ad decimum tertium, ſed ad decimum quartum tranſibant. Eſt etiam apud Hippocratem, ei, quem ſeptimus dies liberaturus ſit, quartum eſſe graviſſimum. Ita, illo quoque auctore, in die pari et gravior febris eſſe poteſt, et certa futuri nota. Atque idem alio loco quartum quemque diem, ut in utrumque efficaciſſimum apprehendit; id eſt, quartum, ſeptimum, undecimum, quartum decimum, decimum ſeptimum: in quo ab impari ad paris rationem tranſit. Et ne in hoc quidem propoſitum conſervavit; cum a ſeptimo die undecimus, non quartus, ſed quintus ſit. Adeo apparet, quacumque ratione ad numerum reſpexerimus, nihil rationis ſub illo quidem auctore, reperiri. Verum in his quidem antiquos tunc celebres admodum Pythagorici numeri fefellerunt: cum hic quoque medicus non numerare dies debeat, ſed ipſas acceſſiones intueri; et ex his conjectare, quando dandus cibus ſit. Lib. III. c. iv.

(4) The paſſages in which Galen appears to have been more explicit than his predeceſſors, are the following.—Αρχην γαρ του νοσειν, εικεικεν ειναι νομιζεον αυτοις τον χρονον, ηνικα σαφως αρξαμενοι πυρετιειν καλεκλιθησαν. ου γαρ δη ταυτο γε εστι κεφαλης αλγημα και πυρετος, ωσπερ ουδ' αγρυπνια, και ανορεξια, και βαρος ολου του σωματος, η κοπωδης αισθησις, αλλ' εκαστον τουτων ειερον τι του πυρετιειν υπαρχον, αγγελλει πυρετον.—De dieb. crit. lib. I. Tom III. p. 428. edit. Baſil.—Πρωτην τοινυν απασων των κρισιμων ημεραν την εβδομην ειπωμεν, ου αριθμω δηλονοτι και taξει πρωτην, αλλα

αλλα δυναμει τε και αξιωματι. Tom. III. p. 426. In the following page he is ſtill more explicit: Της εβδομης την φυσιν, ἣ τεσσαρες και δεκατη μαλιστα μεν μιμειται, πλησιον δ' αυτων εστιν εννατη τε και ενδεκατη, και εικοστη, και ταυταις εγγυς επτα και δεκατη και πεμπτη, και μετα ταυτας ἣ τεταρτη, και μετα ταυτην, ἣ τριτη τε και ἣ σκιωδεκατη.—In regard to the mode of calculating the time, he obſerves, Τῳ δ'ειναι το μεταβαλλον εν κινησει, χρονος αναγκαιος εξευρισκεται τοις μεταβολαις, ὡστε εξ αναγκης και αριθμος, p. 448.—Ει μεν εν αρτιαις ὁ παροξυσμος γενοιτο, καλα την ἑκτην εσεσθαι προσδοκαν, ει δε ταυτην ὑπερβαλλει, καλα την ογδοην. ει δε εν περιττοις, καλα την εβδομην. αγαθων δε σημειων παροντων, καλα την εβδομην ἡμεραν λυθησεται το νοσημα, p. 432.—Εν γαρ τοις παροξυσμοις αἱ κρισεις γινονται τουπιπαν, p. 430.—In referring the criſis to the critical days, this author attempts to eſtabliſh rules which do not ſeem to be admiſſible. Καλα μεν γαρ την πρωτην ὑποθεσιν εν τη τρισκαιδεκατη νυκτι παροξυνθεις κρισιμως, εἰτ' εν τη τεσσαρες και δεκατη γενομενος απυρετος, ου τρισκαιδεκαταιος, αλλα τεσσαρες και δεκαταιος ελεγετο κεκρισθαι, &c. p. 430.

(5) Aetius Amidenus has comprized, in two ſmall folio pages, the ſum of the doctrines of Galen. Lib v. cxxv. and cxxvi. p. 79 and 80. edit. Ald.

(6) Και εισι μεν αυτων αἱ κρινειν πεφυκασι, και βραχειας ὁρμης φυσεως λαβοντες, καθαπερ ἡ εβδομη και τεσσαρες και δεκατη, αἱ πολλαι δε, εν μεν ταις σφοδρα κινησεσιν κρινουσιν, αλλως δε ου δυνανται. Paul. opera. Lib. II. c. vi. p. 31. edit. Baſil.

(7) His words are the following:

واذا ولدت المراة ثم عرض لها حمي فليحسب من الحمي لا من الولدة فذلک خطا قال به قوم و اکثر ما يعرض ذلک يعرض بعد الثاني و الثالث

Tom. II. p. 59. i. e. And when a woman is delivered of a child, in conſequence of which a fever ſupervenes, it is proper in ſuch caſes to calculate the critical days from the commencement of the fever, not from the birth of the child. The latter is an error of which ſome authors have taken notice. And, moreover, where ſuch accidents (viz. fevers) happen in the above ſituation, they do not ordinarily happen till the ſecond or third day after delivery.

و اليوم الحادي عشر ليس في قوة الرابع عشر لكنه في الامراض التي تاتي نوابيها في الافراد كالغب قوي جدا و اقوي من الرابع عشر

Tom. II. p. 60. i. e. The eleventh is not of equal power with the fourteenth, as a critical day. Still, however, in thoſe illneſſes, the paroxyſms of which happen on the odd days, (ſuch as the tertian) it is a very powerful critical day; even a more powerful one than the four-

fourteenth.—In the ſame chapter an obſervation is mentioned of conſiderable importance, and which appears to be well founded.

و اعلم ان اللمراض التي تنوب في الافراد
كالغب و اكثر الحادة هي اسرع بحرانا
و بحر اناتها في الافراد فلذلك تنتظر في
الغب الحادي عشر و لا تنتظر للرابع عشر الا
قليلا

And bear in mind, that thoſe illneſſes, the paroxyſms, of which happen on odd days, (ſuch as the tertian, and even the greater part of acute diſeaſes,) have in general a ſpeedy termination; and further, that this termination or criſis is generally on an odd day. It is neceſſary, therefore, in inſtances of the tertian, to look for ſuch changes on the eleventh. They happen but rarely on the fourteenth.

(9) The following is the reſult of Hoffman's obſervations.—Scilicet frequentius obſervavi, febres quaſdam viginti quatuor horarum ſpartio perfecte terminari, quas Veteres ea propter dixerunt ephemeras. Synocham mitiorem quarto, graviorem ſeptimo die, vel per narium ſtillicidium, cum proclivitate ad ſomnum, vel per largum ſudorem cedere; ardentes vero et bilioſas febres, cauſos dictas, niſi funeſtum ſortiantur exitum, ut plurimum tertio vel undecimo die,

die, liberali ſudatione, plerumque cum alvi fluxu, ad finem pertingere, expertus novi. Ipſæ tertianæ ſæpius cum intenſo æſtu aggrediuntur; circa tertium autem et quartum diem remittit inſultus, ac in intermittentis typum tranſit. Tom. I. p. 388.

(10) It is not long ſince the works of Foreſtus came to my hands; otherwiſe I ſhould not have omitted mentioning a name celebrated among the advocates of critical days in febrile diſeaſes. The different caſes of fevers, indeed, which are very accurately related by this author, afford the moſt explicit and authentic evidence of the power of critical days that is any where to be met with, either in ancient or in modern writers.——They have this advantage likewiſe, that they were not collected with a view to ſupport a particular doctrine.

(11) The reſult of Dr. Cullen's experience is the following, "That fevers with moderate ſymptoms, generally caſes of the Synocha, frequently terminate in nine days or ſooner, and very conſtantly on one or other of the critical days that fall within that period: but it is very rare, in this climate, that caſes of either the Typhus or Synochus, terminate before the eleventh day; and when they do terminate on this day, it is for the moſt part fatally. When they are protracted beyond this time, I have conſtantly found that their terminations were upon

upon the fourteenth, ſeventeenth, or twentieth day." Vol. I. ſ. cxxiv.

(12) Τινες μεν ουν αἱ μετα την εικοστην ἡμεραν κρισιμοι. την μεν εικοστην πρωτην, οἱ περι τον Αρχιγενην τε και Διοκλεα πρωτην πασων μαλιστα προσιενται, και γαρ ὁ Αρχιγενης, καὶ της εικοστης αυτην προσκρινει, εμοι δ' ουχ ὑτως εφανη, καθαπερ ουδ' Ιπποκρατη. Gal. oper. Tom. III. p. 431.

(13) The principle and movements of the quaternary period, and the laws of προσθεσις are fully explained by the laborious commentator of Hippocrates, in the ſecond book, περι ἡμερων κριτικων.—Της γαρ εβδομαδος διχη τμηθεισης, ἡ τε τεταρτη δεξαμενη την τομην, περας μεν εστι της πρωτης τετραδος, αρχη δε της δευτερας εγενετο. ταχα δ' αν ἡ ἑβδομας αυτη νομισθειη ηδη τελεια περιοδος ὑπαρχειν. ου γαρ δη καπι ταυτης γε την ζημεραν αρχην της δευτερας ἑβδομαδος ειναι συμβεβηκεν. ὑτω γαρ αν εις την ιγ ουκ εις την ιδ ενεπιπτε το τελος αυτης. αλλ' επει παλιν ἡ ιδ περας θ'αμα της δευτερας εβδομαδος, αρχη τε της τριτης εστιν, ουκετ' αν ὑτως γε τελεια περιοδος ἡ εβδομας ὑπαρχη, δις μεν γαρ εαυτην επολυπλασιαζε, το τριτον δε ουκ ηδυνηθη, &c. p. 441.

(14) The prevalence of a quartan period in fevers after they have paſſed the eleventh, which this author imagines he has uniformly obſerved, leaves no room he ſays for doubting, that the twentieth and not the twenty-firſt is the critical day marked by Hippocrates, though the laſt is mentioned as ſuch in the common edition of the aphoriſms taken from an erroneous manuſcript, ſ. cxx.—If there has been, in fact, an

error in the manuſcript of the aphoriſm, the ſame error has found its way to the tract περὶ ἡμερῶν κρισίμων.

(15) Dr. Cullen's expreſs words are the following. From the beginning to the eleventh, a tertian period takes place; and from the eleventh to the twentieth, and perhaps longer, a quartan period is as ſteadily purſued. ſ. cxix.

(16) Quare et circa criſes, quod die ſeptima aut quarta decima humores moveantur in nobis, nulla certa alia cauſa eſt, niſi quod talem accidit eſſe proportionem naturæ ad humorem, quem tanto tempore concoquit, concoctum expellit, hunc quidem in ſeptima, illum quidem in quarta decima. Fracaſt. de dieb. crit.

(17) The influence of the moon as mentioned by Galen, and the motions of the humours inſiſted on by Fracaſtorius, as the cauſe of critical periods in fevers, are, ſtrictly ſpeaking, the only opinions which have hitherto been offered to the public on this ſubject; yet I muſt not omit to mention a modification of the former by Dr. Balfour, who publiſhed, a few years ago, a ſmall treatiſe on the influence of the moon in the fevers of the Eaſt Indies. After mentioning an opinion, which has certainly many arguments to ſupport it, viz. that the invaſion and relapſes of fevers are much influenced by the new and full moon; he goes a ſtep farther, and attempts to perſuade us, that the

the buſineſs of criſis is regulated by the ſame cauſes.—I ſhall tranſcribe his words, which are ſomewhat remarkable: viz. That along with the full and change of the moon there is conſtantly recurring ſome uncommon or adventitious ſtate or quality in the air, which increaſes fever, and diſpoſes to an unfavourable termination or criſis; and, that along with the intervals, there is as conſtantly recurring a ſtate or quality in the air oppoſite to the former, which does not excite, but diminiſhes fever, and diſpoſes to a favourable criſis. The conjecture is probably ingenious; but it is merely a conjecture, without the leaſt foundation to reſt upon. It is deſtroyed by the following facts: that fevers are generally obſerved to be of a ſtated duration; that they terminate on regular critical days; even that they terminate on the day of new or full moon; and that a material aggravation of the ſymptoms of an exiſting fever is not generally obſerved at theſe periods, though invaſions are acknowledged to be then more common.

CHAP. IV.

(1) Sylvius de le Boe, in a treatiſe concerning the Epidemic, which raged at Leyden in the year 1669, has the following words: Aquæ autem Leidenſes non tantum corrumpuntur ac putreſcunt propter ſui moram ac ſtagnationem; verum etiam propter ſalſas aliquot retro annis huc tranſmiſſas, et ipſarum corruptionem augentes, p. 823. This ſuppoſition has been conſidered as a fact.

(2) Lanciſi opera, p. 112.

(3) Diſeaſes of the army, Part II. c. iii. p. 98.

(4) Εικοσι τας προ Κυνος, και εικοσι τας μεσεπειτα. Οικω εν σκιερῳ Διονυσῳ χρησθαι ιατρῳ. Œnomaus. Euſebii præpar. Evangel.

(5) Περι θηριακης.

(6) Narratum eſt a fide dignis medicis et primariis hujus urbis, contigiſſe aliquando, ut in defectione ſolis in manibus curandum Dominam illuſtrem de Varades haberent. Quum paulo ante eclipſim iſtam nil tale de ægra cogitarent, in ipſo defectionis momento, dum attenti in cænaculo ſublimiori aqua in pelvim conjecta defectum ipſius ſolis intuentur, evocantur

cantur ſtatim ad ægram decumbentem, quod ea animam agere videretur. Sed ſole ſuum primarium curſum repetente, et prout vires acquirebat, ſeſeque aperiebat, ægra vires corpuſque amiſſum reſumebat. Bal. Epid. lib. I. p. 32.

(7) Obſervatione vero dignum fuit, quod poſt plenilunium, ac multo magis ſilente Luna ferociebat hæc febris, quæ poſtea ad novum ejuſdum lumen miteſcebat, nec mea tantum, ſed aliorum quoque profeſſorum conſtans fuit obſervatio, quod non parum contulit ad hujus febris prognoſim, et curationem; num vero ſuper epidemicos affectus peculiare jus aliquod habeat lunare ſydus, ut illius mutationibus, et variis phaſibus auſcultent, non indignum eſt obſervatione. Conſtitut. epid. p. 193. The fact which he mentions in the next paragraph is more explicit. Admirandum certe fuit id quod die, Jan. 21, 1693, contigit: facta enim per noctem lunari eclipſi major pars ægrotantium obiit, ac eadem pene hora, qua nimirum Luna laborabat, quin et nonnulli repentina morte occubuere.

(8) Neque ſilentio prætereundum, quod die, quo ſol defecit, viginti recens corripiebantur. De Febr. Anom. Batav. p. 21.

(9) See the London Medical Journal for the year 1787.

CHAP.

CHAP. V.

(1) It is difficult, I have obſerved, to attain a clear idea of the opinion which Hippocrates actually entertained concerning the ſubſtance, or immediate cauſe of fevers. I ſhall, however, endeavour to bring under one view the different paſſages in this author's works which furniſh us with his various conjectures. And in the firſt place, Αλλ' οἱ πυρεταινοντες τοισι καυσοισι και περιπλευμονιησι και αλλοισιν ισχυροισι νοσημασι ου τοσχεως εκ της θερμης απαλλασσονται, ουδε παρεστιν ενταυθ' το θερμον επι το ψυχρον. εγω δε τουτο μα μεγιστον τεκμηριον ἡγευμαι ειναι, ὁτι ου δια το θερμον απλως πυρεταινουσιν οἱ ανθρωποι. ου δε τουτο ειη το αιτιον της κακωσιος μουνον. αλλ' εστι και πικρον, και θερμον το αυτο, και θερμον και οξυ, και αλμυρον και θερμον, και αλλα μυρια, και παλιν γεψυχον μετα δυναμεων ετερων. τα μεν ουν λυμαινομενα, ταυτα εξι. συμπαρεστι δε και το θερμον, ρωμης μετεχον. ὡς αν το ἡγευμενον, και παροξυνομενον, και αυξανομενον ἁμα κεινω. δυναμιν δε ουδεμιαν τελειω της προσηκουσης δηλαδη. Περι αρχαιης τεχνης, ſ. I. p. 15. In this paſſage Hippocrates has ſuggeſted the inſufficiency of ſimple heat to conſtitute a fever. In the ſubſequent, he explains his ideas ſomewhat more explicitly. Πυρετοι δι' αυτο δε γινονται ὁταν του σωματος ὑπερπληγμηναντος αἱ σαρκες ανοιδησωσιν και το φλεγμα και ἡ χολη καταπκλεισθεντα αιρεμιζωσι, και μη αναψυχηται μηδεν μητ' εξιον, μητε κινευμενον, μητ' αλλου ὑπιοντος. Περι τοπων των κατ' ανθρωπον, ſ. IV. p. 417. This ſeems to afford an

an idea of obſtruction. It is more particularly modified in the following paſſage, in the treatiſe περι παθων, ſ. V. p. 518.—ἡ δε νουσος (Καυσος) γινεται ὑπο χολης, ὁταν κινηθεισα εἰς του σωματος καταςηριξῃ: As alſo in the treatiſe περι κρισιμων ἡμερων, p. 57. Τα δε οξεα των νοσηματων γινεται αποχολης, ὁκοταν επι το ἡπαρ επιρρυῃ, και εις την κεφαλην καταςῃ, &c.—In the above paſſage, this author has a direct reference to bile, as the cauſe of fever; but he has defined its influence and dominion with more preciſion and exactneſs in the work περι Φυσιος ανθρωπου, ſ. III. p. 231. Οἱ πλειστοι των πυρετων. γινονται αποχολης. ειδεα δε πυρετων εισι τεσσαρες, χωρις των εν τησι οδυνησι γινομενων, τησιν αποκεκριμενησιν, ονοματα δ' αυτοισιν εστι, ξυνοχος, αμφημερινος, τριταιος, τεταρταιος. ὁ μεν ουν ξυνοχος καλεομενος γινεται απο πλειστης χολης και ακρητεσταλης, και τας κρισεας εν ελαχιστῳ χρονῳ ποιεεται. το γαρ σωμα, ου διαψυχομενον ουδενα χρονον, συνηκεται ταχεως, ὁτε ὑπο πολλου του θερμου θερμαινομενον. ὁ δε αμφημερινος, μετα τον ξυνοχον απο πλειστηχολης γινεται, και απαλλασσεται ταχιστα των αλλων. μακροτερος δε εστι του ξυνοχου, ὁκοσῳ απο ελασσονος γινεται χολης, και ὁτι εχει αναπαυσιν το σωμα. εν δε τῳ ξυνοχῳ ουκ αναπαυεται ουδενα χρονον. ὁ δε τριταιος, μακροτερος εστι του αμφημερινου, και απο χολης ελασσονος γινεται. ὁκοσῳ δε πλειονα χρονον εν τῳ τριταιῳ ἡ τῳ αμφημερινῳ το σωμα αναπαυεται, τοσουτῳ χρονιωτερος ουτος ὁ πυρετος του αμφημερινου εστιν. οἱ δε τεταρταιοι τα μεν αλλα κατα τον αυτον λογον. χρονιωτεροι δε μαλλα των τριταιων εισιν, ὁκοσῳ ελαττον τι μερος μετεχουσι χολης της την θερμασιαν παρεχουσης, τουτε διαψυχεσθαι το σωμα, πλειον μετεχουσι. πρασγινεται δε αυτοισιν απο μελαινης χολης.

το περισσον του το και δυσαπαλλακ]αν, μελαιναν γαρ χολην των εν τῳ σωμα]ι ενεον]ων χυμων, γλισχρο]αν, και τας εδρας χρονιο]ας ποιε]ται, &c. This explanation of the different forms of fevers is curious; and perhaps it may be conſidered as the foundation of the humoural doctrine, which was famous in the ſchools of phyſic for a long ſeries of years.

(2) Επιγενημα ειναι τον πυρε]ον, επιγινεται δε τραυμασι και βουβωσι. Galen oper. Tom. IV. p. 438.—Περι φιλοσοφ. Ιατρ.

(3) Transfuſo in arterias ſanguine febrim fieri, idque nimis repleto corpore incidere. Celſ. lib. I. Or, as Galen expreſſes it in the treatiſe Περι φιλοσοφ. Ιατριας, Ερασιστρα]ος ὁριζε]αι τον πυρε]ον κινημα αἱμα]ος παρεμπιπ]ωκο]ος εις τα του πνευμα]ος αγγεια απο αιρε]ως γινομενον, καθαπερ επι της θαλλα]της ὁταν μηδεν κινῃ αυ]ην πνευμα πρεμωσιν.

(4) Febrium ponunt ſignum fervorem plurimum atque immutationem pulſus in vehementia, niſi ex aliqua hæc manifeſta fuerint cauſa.—Item typum quotidianum majorum corpuſculorum ſtatione fieri aſſeverat: cito enim inquit ea exantlari atque impleri: Tertianum vero minorum ſtatione corpuſculorum. Item quartanum minutiſſimorum. Dificile enim impleri atque exantlari poſſunt. Cæli Aurelian. lib. I. c. xiv.—Or, as Celſus expreſſes it in his preface, Si manantiâ corpuſcula per invisibilia foramina ſub-

ſubſiſtendo iter claudunt. Galen has likewiſe tranſmitted to us the ſame idea in the treatiſe περι τρομου, &c. p. 369. Απαντα πυρετον επι τισιν εμφραξεσιν ογκων εν τοροις αει συνιϛασθαι λεγων, εν μεγεθει πορων την διαφοραν τιθεμενος αυτου.

(5) Απαντα πυρετον εν τη των χυμων σηψει γινεσθαι. Galen oper. Tom. III. p. 324.

(6) The definition, or in other words the cauſe of fever, is more explicitly expreſſed in the writings of Galen, than in the works of preceeding authors. Galen obſerves in the firſt place, ὁτι ὁ πυρετος γινεται, ὁταν εν τη καρδια θερμοτης τις γινεται παραφυσιν; but adds, εϛι μεν δη που και αυτο τουτο παραφυσιν θερμοτης, ου μεν δη γε πω πυρετος, ει μη συνεκθερμαινη την καρδιαν. Περι πυρετων διαφορ. Tom. III. p. 322. In the following page there is ſtill a farther modification: Συνεκθερμαινεϛαι γαρ αει τω θερμαινθεντι το συνεχες, αχρις αν επι την καρδιαν ἡ διαθεσις αφικηται. This, perhaps, has ſome reference to ſymptomatic fevers. This author endeavours next to define the difference of fevers, and remarks, ὁτι αἱ διαφοραι δε καται γενος της θερμοτητος, απο της των ὑλων διαφορας ελαμβανοντο των δεχομενων την πυρετωδη θερμασιαν, τριων ουσων καται γενος. ητοι γαρ εν αυτω τω σωματι της καρδιας αναπτεσθαι πρωτην αυτην ελεγομεν, η εν τοις χυμοις, η εν τω πνευματι—Επει τοι νυν ορωμεν, ου χ ἑνα τροπον ουτε γενεσεως ουτε αυξησεως της θερμασιας, ὁτι μηδε αυτου του πυρος, αλλ' ητοι δια κινησιν, η δια σηψιν, η δια ὁμιλιαν ἑτερης θερμοτητος, η δι' επιχεσιν αποροης θερμης,

η δι' επιμιξιαν ουσιας θερμης, ibid.—And he further eſtabliſhes differences, according as the diſeaſe exerts itſelf upon the different conſtituent parts of the body; as, Τα ισχοντα, τα ενισχομενα, και τα ενορμωντα, p. 321. In accounting for the difference of types I obſerved formerly, that Galen had departed very far from the footſteps of his maſter, who conſidered the difference of types as principally ariſing from difference in the quantity of the bile. Galen explains it in a different manner.—Οἱ δε συνεχεις αφικονται στεγνωμενω και περιεχομενω εν ταις φλεψιν. Των μεν ουν διαλειποντων τρεις εισι αἱ πασαι διαφοραι, αμφημερινος, τριταιος, και τεταρταιος. επι φλεγματι μεν ὁ αμφημερινος σαπεντι. επι δε ταις χολαις εκατεραις, οἱ ἑτεροι· τη ξανθη μεν ὁ τριταιος, τη μελαινη δε ὁτεταρταιος. Περι διαφοι, Πυρετ. Lib. 6. Tom. III. p. 330.

(7) Συνισταται γαρ επι πληθει αἱματος θερμου, μηπω δεσηποτος. το μη διαπνεισθαι τη ζεσει μονη την θερμασιαν εγειροντος. lib. V. edit. Aldin.

الحمي حرارة غريبة تشتعل في القلب و
تنبت ين بتوسط للروح والدم في للشرايمنه
Cap. 1. Tom. II. والعروق في حميع البدن

i. e. Fever is a preternatural or adventitious heat, excited in the heart, and communicated to the reſt of the body, by means of the veins and arteries.

(9) The theory of Van Helmont, though whimſical and unphiloſophical, ſtill deſerves to be recorded. His words are the following: Siquidem calor febrium eſt accenſus in impetum faciente

faciente Archeo, et radix febrium eſt ipſa materia peccans. Reſpiciunt ergo tantum ad ablationem effectus conſequentis, et reſultantis ex poſitione radicis illius, cujus ergo Archeus non quidem a radice accenditur, ſed a calore aliundo hauſto, dum nimirum ſeipſum accendit propria thymoſi, & calore ſuo gradum ſupra exigentiam deducto, in quo totus eſt moleſtus, quatenus ſupra ſuæ exigentiæ amplitudinem eſt delatus. Nec enim putandum, quod exoſæ materiæ febrili, quam peccantem mecum nominant, ſic inſit aliquis calor, ut deinceps is febriliter calefaciat totum integrale.—Accendit mimirum ſeipſum Archeus, in niſu quo cuperit expellere materiam occaſionalem. Tract. de febrib. c. 1.

(10) As Van Helmont ſeemed to attribute the appearances, or ſymptoms of fevers to the efforts of merely an irritated Archeus; ſo Stahl goes farther, and ſuggeſts, that thoſe efforts ariſe from a principle of intelligence in the ſyſtem endeavouring to remove cauſes which are diſagreeable or hurtful to life. Quod febres omnes ſint intentiones motuum vitalium ſecretoriorum et excretoriorum, ab ipſa natura humana, ſeu anima vitaliter movente, ad conſervationem corporis, inſtitutæ, directæ, et ad effectum perductæ. Stahli Oper. Chym. Phyſic. Medu. p. 446.

(11) Spiritus, ſeu ſucci nervei ſolito redditi acriores, nervos et cor irritantes, ſunt cauſæ productivæ primæ et immediatæ excandeſcentiæ febrilis:—to which he afterwards adds this farther

ther explanation. Loca igitur, in quibus ſucci nervei primo fermentantur, ſunt glandulæ et radices nervorum eorundem obſtructæ, et male affectæ et irritatæ. Cauſa vero fermentationis eſt retentio violenta partium quæ excerni debuerant e nervis, vel coinquinatio ibidem communicata, pariterque ob retentionem apta ad intemperiem ſpirituum procurandam.—Borelli de motu excandeſcentiæ febrilis.

(12) Radices nervorum in cortice cerebri laxari, vel propter poros ab aere occluſos, vel anomalium in aliquo ex cœteris non naturalibus, vel præ aliqua alia ſubita occaſione. Hinc nervos admittere materiam incongruam. Quæ mora quam hic trahit variis de cauſis, ſenſim exaltatur. Verum ad aliquot horas, forſan et dies ſine moleſtia per nervos et fibras progreditur. Donec ad debitum plenitudinis et maturationis gradum avecta, conceptacula lancinare incipiat, unde rigor. Cole Nov. Hypoth. de Febrib. c. v.

(13) Aſſero igitur, formalem febris rationem, ſive ut ita loquor, fundamentalem cauſam, conſiſtere in ſpaſmodica univerſi generis nervoſi et fibroſi affectione, quæ maxime ex ſpinali medulla procedit, et ſucceſſive ab exterioribus ad interiores partes vergit. Hoffm. Op. Tom. XI. p. 10.

CHAP. VI.

Though I have deſcribed the endemic fever of Jamaica as diſtinctly as is in my power; yet as I have often obſerved that we attain more accurate ideas from the detail of a particular hiſtory than from general deſcription, I ſhall ſelect from my notes two or three caſes which may ſerve to give a clearer view of the different ſpecies of the diſeaſe. And in the firſt place I ſhall deſcribe an inſtance of fever, which was diſtinguiſhed through the whole of its courſe by ſymptoms of the general inflammatory diatheſis.

(1) Lennox, a ſoldier of the 60th regiment, aged 40, of a firm and compact habit of body, was ſeized on the 3d of December, between eight and nine in the morning, with a ſlight horror or ſhivering, preceded and accompanied by other uſual marks of fever. The ſymptoms of coldneſs and ſhivering went off in the courſe of eight or ten minutes. A hot fit ſucceeded, with a good deal of headach, hurried reſpiration, conſiderable thirſt, a ſtrong, full, and frequent pulſe. After a continuance of four or five hours, ſweat began to appear on the head and breaſt, which extending gradually to the extremities brought with it a tolerable diſtinct remiſſion of the fever. 2. The fever appeared

to

to be gone off very completely by ten o'clock at night. The patient reſted well during the night, and continued in this ſame ſtate of eaſe till about five o'clock in the evening. He then became uneaſy and reſtleſs, with headach and a ſlight feveriſh heat. 5 The feveriſh indiſpoſition declined in the courſe of the night. He became eaſier towards morning, and about ſeven might be ſaid to be in a ſtate of remiſſion. About nine a paroxyſm commenced, ſimilar to the paroxyſm of the firſt day, though with a ſtill ſlighter degree of horror and ſhivering; the hot ſtc ran ſtill higher, with much headach, thirſt, and a ſtrong vigorous pulſe. The ſweating at laſt made its appearance, and the violence of the fever declined: there ſtill however remained ſome degree of headach, pain of the back, and thirſt, with an averſion to food, and a more than natural frequency of pulſe. 6. Reſted tolerably; but ſtill is not free from headach and pain of the back: the tongue is dry and foul, and the coat which covers it is ſmooth, but of conſiderable thickneſs, and of a cream colour. About four in the evening the paroxyſm of a fever made its appearance, ſimilar, in ſome degree, to the paroxyſm of the fourth, but of a much greater degree of violence. It continued for eight hours, and declined gradually towards morning. 7. There were no perceivable marks of fever at ſeven in the morning. A little after nine, however, a paroxyſm commenced, ſimilar, in every reſpect, to the paroxyſm of the fifth. 8. About three in the afternoon a paroxyſm began ſimilar to the paroxyſm of the 6th, but

ſtill

ſtill more violent. It declined after the uſual duration, and was ſucceded on the 9th by another paroxyſm ſimilar to that of the 7th. The remiſſion which ſucceeded appeared to be ſtill more perfect than any of the preceding; the ſweat was even more copious, and the pulſe became ſofter and more expanded after it than it had hitherto done. 10. A paroxyſm returned about half paſt two, ſimilar to the paroxyſm of the eighth, but not leſs violent in degree. It terminated, however, in a more fluid and univerſal ſweat; the pulſe and the ſtate of the ſkin returned perfectly to what they were in health; the mucous coat ſeparated from the tongue; the eye and countenance aſſumed their natural ſerenity, and unequivocal marks of final criſis appeared on the morning of the eleventh. The above caſe is an inſtance of the double tertian: the fever of the even day terminated the diſeaſe; and the pulſe through the whole courſe was vigorous and ſtrong, or marks of inflammatory diatheſis, in a moderate degree, were conſtantly preſent.

(2) Henley, a ſoldier of the 60th regiment, was ſeized on the 6th of May, about five in the evening, with a nauſea, or unpleaſant affection at ſtomach, marks of great langour and debility, a ſlight feeling of coldneſs and horror, a very weak and frequent pulſe, headach, pain of the back, and other ſymptoms which are uſual in the acceſſion of fevers. After a continuance of ten or twelve hours, theſe ſymptoms were ſo far gone off, that the patient was conſidered

dered to be in the ſtate of remiſſion. 7. The exacerbation of the fever returned again about the ſame hour in the evening at which it had firſt come on, though without marks of preceding coldneſs or ſhivering. The pulſe was ſmall, obſcure, and extremely frequent; the heat of the body was not increaſed very materially; the thirſt was only in a moderate degree, but there was much nauſea, an averſion to food, a diſpoſition to faint in an erect poſture, deep and heavy ſighing, tremor of the tongue, and a ſad and deſponding ſtate of the eye and countenance. 8. The ſymptoms of fever abated towards morning, and a remiſſion, though by no means a diſtinct one, took place. The pulſe became ſomewhat ſlower, and more expanded; the ſighing and anxiety abated a little, and there was evidently a ſtate of greater eaſe; though ſtill remaind marks of great debility, and ſigns of ſpaſmodic ſtricture on the ſurface of the body. The heat was lower than it uſually is in health. About five in the evening the ſymptoms, which had prevailed in the former paroxyſms, returned again, but with conſiderable aggravation. The head was affected with delirium, and there was a conſiderable degree of tremor and ſtarting. 9. Eaſier in the morning, though the remiſſion was in no degree more complete than the former. About the uſual hour in the evening the ſame ſymptoms returned with aggravation. 10. The remiſſion as the former; the heat of the body below natural; the pulſe obſcure and frequent; the ſigns of debility very great. The exacerbation returned

turned again at the uſual hour; the paroxyſm appeared to be ſomewhat more violent; the delirium was higher, the heat greater, and the pulſe acquired rather more ſtrength and fulneſs. 11. Eaſier in the morning, with a remiſſion in every reſpect as complete as the former; the pulſe diſtinct, and rather more expanded; and, upon the whole, an appearance of rather more vigour. The paroxyſm was renewed in the evening as uſual. 12. Remiſſion in the morning rather more complete: more vigour in the pulſe. The exacerbation as uſual. 13. In the morning, inſtead of the uſual remiſſion, there appeared marks of a complete and final criſis; the ſighing, which had been troubleſome throughout the courſe of the diſeaſe, vaniſhed; the eye and countenance aſſumed their uſual ſerenity and chearfulneſs; the pulſe became ſlower, ſofter, and more expanded; and the tongue parted with its coat or covering. The above is an inſtance of fever with ſymptoms of nervous affection.

(3) Sergeant Negli, on the 2d of November, about eight in the morning, was ſeized with horror, ſhivering, and other ſymptoms, which are uſual in the acceſſion of fevers. The hot fit did not run very high, and before evening the paroxyſm was conſiderably abated. 3. This patient is now in the ſtate of remiſſion, the heat of the body is not greater than natural; but the caſe ſeems to be attended with ſome ſymptoms which are not very common in the fevers of this country. The countenance is clouded,

dark, and grim; the appearance of the eye is ſad and deſponding; and he expreſſes an uneaſineſs in his feelings which is not eaſily accounted for. 4. The paroxyſm returned about four in the morning. It was greatly more violent than the preceding; and though it might be ſaid to remit very completely, if we judge by the heat of the body and ſtate of the pulſe; yet there ſtill remained ſome uncommon and unpleaſant feelings. The eye and countenance were not only dark and deſponding, but the tongue was covered with a ſlimy mucous coat, through which the red ſurface appeared obſcurely; there were ſtrange and unaccountable twitchings of the ſtomach and bowels; diſturbed ſleep; frightful dreams, and foreboding apprehenſions. 5 A paroxyſm came on this evening near twelve hours ſooner than it was expected. After expreſſing an eaſineſs at ſtomach, and throwing up ſome mattter of a dark colour, he was ſuddenly ſeized with a ſtupor and inſenſibility, from which he could not be rouſed by all the applications of art. He died in about ſixteen hours. This caſe affords an inſtance of fever with marks of a peculiar malignity. The appearances of danger were ſudden and unexpected; and, as it was among the firſt inſtances of the kind which I had ſeen, I was diſappointed, and in ſome degree confounded at the event.

(4) Thomſon, a young man aged twenty, after more than uſual exerciſe in the heat of the ſun, was ſeized with ſickneſs, ſhiverings, and

and other ſigns of fever, about nine o'clock in the morning of the 3d of February. The pulſe was hard, frequent, and irritated; the eye was ſad, and ſometimes gliſtening; the countenance fluſhed, but rather dark and overcaſt; the reſpiration hurried; nauſea was troubleſome, with a good deal of anxiety and reſtleſsneſs. The paroxyſm continued long, and did not indeed go off very perfectly at laſt. 4. Reſted but indifferently; is now ſomewhat eaſier, though the remiſſion is far from being perfect; the thirſt is conſiderable; the tongue dry and foul, the ſtomach loathes all ſorts of food; and he ſeems to be much diſtreſſed with flatus and ructus; the ſtools are dark-coloured and fœtid; the pulſe is more frequent than natural, hard and irritated, and the ſkin is only partially moiſt. 5. An exacerbation of fever happened about nine in the morning. The ſymptoms were of the ſame kind as in the firſt paroxyſm, only ſomewhat more violent in degree. The anxiety at ſtomach was particularly diſtreſſing, and there appeared ſtill more evident marks of putreſcent tendency in the alimentary canal. 6. An uneaſy night: an imperfect and obſcure remiſſion: the gums redder than they naturally are: the eye has a gliſtening appearance, and the countenance is ſtill confuſed and clouded: the tongue is dry; the thirſt great; and ructus and flatus are very diſtreſſing: the pulſe ſtill irritated and quick: there is not any very remarkable diſpoſition to faint in an erect poſture: the ſtools fœtid 7. The exacerbation returned about the ſame hour as on the fifth, and with ſtill greater aggravation:

the ſymptoms of diſtreſs in the ſtomach and bowels were particularly alarming; with nauſea, nidoroſe belchings, and large watery fœtid ſtools. 8. Somewhat eaſier in the morning, though the remiſſion can only be ſaid to be obſcure. 9. The exacerbation happened at the ſame hour as on the ſeventh, and continued for nearly the ſame length of time. 10. Inſtead of obſcure remiſſion, marks of final criſis are now evident; the pulſe is returned nearly to its natural ſtate; the eye and countenance have aſſumed their uſual ſerenity; the ſkin is moiſt, and gives no marks of remaining ſpaſmodic ſtricture; the anxiety and ructus have ceaſed; and the ſtate of the ſtomach and bowels appears to be almoſt natural. The above is an inſtance of fever, in which there were very evident ſigns of putreſcent tendency in the alimentary canal; even ſome obſcure marks of its progreſs in the general ſyſtem, complicated, however, with an irritated ſtate of the vaſcular ſyſtem, or ſuch ſymptoms as might be conſidered as belonging to the apparent inflammatory diatheſis.

(5) Cunningham, a ſailor, aged twenty-five, was ſeized on the 5th of July, about five in the evening, with ſickneſs, ſhiverings, head-ach, and the other uſual ſigns of the remitting fever of the country. Its more diſtreſſing ſymptoms were nauſea and vomiting, 6. The remiſſion is tolerably diſtinct; but there is ſtill a good deal of head-ach, thirſt, and ſigns of debility; the tongue is dry, and the pulſe is more frequent than natural. The paroxyſm returned

about five in the evening with increaſed violence, accompanied with ſevere retching, and copious vomiting of bilious matter. 7. Better in the morning; the vomiting has ceaſed, and the remiſſion is tolerably diſtinct. The exacerbation returned at the uſual hour, with the ſame diſtinguiſhing ſymptoms of copious bilious diſcharges. 8. Remiſſion in the morning as uſual; the exacerbation in the evening as the preceding, with diſtreſſing and ſevere vomiting. 9. The uſual remiſſion in the morning. The paroxyſm likewiſe recurred in the evening about the uſual time, but not with the uſual ſymptoms. Inſtead of vomiting of bilious matters, there was ſome degree of delirium, tremors, ſtartings, and other ſymptoms of nervous affection. 10. Theſe ſymptoms remitted in the morning, but there ſtill remained ſigns of great irritability and weakneſs. The ſame train of ſymptoms returned again in the evening: the delirium and tremors were ſtill in a higher degree: the pulſe was ſmall and frequent; and there was occaſionally a great diſpoſition to faint in an erect poſture. 11. Better in the morning, though there are not yet any marks of criſis. The exacerbation returned again in the evening, with ſymptoms ſimilar to thoſe of the preceding paroxyſm. 12. Remiſſion in the morning ſimilar to the former. Exacerbation in the evening rather more violent. 13. Remiſſion as the former; the pulſe however appears to be rather fuller than it has been ſince this change happened in the circumſtances of the diſeaſe. The paroxyſm returned at the uſual hour ſtill more

more violent, though with greater marks of vaſcular excitement. 14. Evident marks of criſis: the tongue begins to part with its covering; the eye and countenance appear clear and animated; the pulſe is ſlower and fuller; and the ſtate of the ſkin does not give any indication of exiſting ſpaſmodic ſtricture. This caſe preſents an inſtance of fever, the firſt part of the courſe of which was diſtinguiſhed by uncommon bilious diſcharges during the time of the paroxyſms; the latter part of it by affection of the nervous ſyſtem.

CHAP.

CHAP. VII.

1. The indications of bilious vomitings in fevers are found in various parts of the works of Hippocrates; and in many inſtances are ſtill more fully explained in the learned Commentaries of Galen. Among other inſtances Hippocrates obſerves, Ὁτι εμετος δε ωφελιμωτατος, ὁ φλεγματος καιχολης συμμε μιγμενος, και μη παχυς καρτα, μηδε πολυς, ὥς μαλιστα. οἵ γαρ ακρητεστεροι, κακιους εισιν. ει δε ειη το εμευμενον πρασοειδες, ῃ πελιδνον, η μελαν, ὁτι αν ῇ τουτεων των χρωματων, νομιζειν χρη πονηρον ειναι. ει δε και παντα τα χρωματα ὁ αυτος ανθρωπος εμεει, καρτα ολεθριον τουτο γινεται. ταχιστα γαρ θανατον σημαινει το πελιον τῶν εμεσματων, ει οζει δυσωδες. πασαι δε αἱ υποσαπροι και δυσωδεες οσμαι, κακαι επι πασι τοισιν εμεομενοισιν. Hip. Progn. lib. i. § 11. p. 41. Similar obſervations are found in the Prorrhetics; and Galen has alſo remarked in firſt book περι κρισεων· τοτε ξανθον ακρητον εον κινδυνωδες.—ει δε ειη οὕτως ακρητον, ποτε μελαν φαινεσθαι, δεινοτερὸν εστι τουτο εκεινου.—Επι εμετῳ λυγξ και οφθαλμα ερυθροι, κακον. Hip. S. vii. ap. iii.—Εν τοισι καυσοισιν εαν επιγενηται ικτερος, και λυγξῃ πεμπταιῳ εοντι, θανατωδες. De Criſib.

2. Διψα παραλογως λυθεισα ενοξεσι κακον. Hip. Prorrhet.

3. Οἱσι

3. Οἱσι χολωδεος διαχωρησιος εȣσης, περι στηθος δηξις και πικροτης, κακον.—Εν πυρετοισι κοιλης εμφυσαιμενης, πνευμα μη διεκπιπτον, κακον. πυρεσσοντι, εν αρχῃ μελαινη χολη ανω ἡ κατω διελθουσα, θανασιμον. Εν οξεσι το αφρωδες, περιχολον διαχωρημα, κακον. κακον δε και το εκλευκον. ετι δι και κακιον το αλητοειδες, κοπριωδες.—Καρος εν τουτοισι κακον, και αἱματωδης διαχωρησις, και κενεαγγιη παραλογος.—Γλιχρον ακρητον, η λευκον διαχωρημα, φλαυρον. φλαυρον δε και το ἅλις εζυμωμενον, ὑπο φλεγματωδες, πονηρον δε και εκ στροφωδεων ὑποστασις ὑποπελιος, πυωδης μεταχολωδεος.—Το αφρωδες περιχολον διαχωρημα, φλαυρον, λεπτον, επαφρον διαχωρημα, ὑδατοχλοον ισχον ὑποστασιν, πονηρον.—Ὑγρον διαχωρημα, και αθροον και κατα μικρον, κακον. Hip. Coac. Præn. Prorrh. de Crisib.—and in various other places.

4. The general indications of sweats are very fully and accurately described in the prognostics of Hippocrates. Οἱ δε ιδρωτες, αριστοι μεν εισιν εν πασι τοις οξεσι νοσημασιν, ὁκοσοι εν ἡμερησι τε κρισιμοισι γινονται, και τελεως τον πυρετον απαλλαττουσιν, αγαθοι δε και ὁκοσοι δια παντος του σωματος γινομενοι, απειδειξαν τον ανθρωπον ευπετεστερον φεροντα το νοσημα. οἱ δε αν μη τοιουτον τι εργασωνται, ου λυσιτελεες. κακιστοι δε οἱ ψυχροι τε και μουνον περι την κεφαλην τε και το προσωπον γινομενοι και τον αυχενα. οὑτοι γαρ ξυν μεν οξει πυρετω θανατον προσημαινουσι. ξυν δε πρηυτερω μηκος νοσου, και οἱ κατα παν το σωμα ὁσαυτως γινομενοι, τοισι περι την κεφαλην, οἱ δε κεγχροειδες και μουνον περι τον τραχηλον γινομενοι, πονηροι, οἱ δε μετασταλαγμων και ατμιζοντες, αγαθοι, κατανοειν δεχρη το συνολον των ιδρωτων. γινονται γαρ οἱ μεν δι' εκλυσιν σωματων, οἱ δε, δια συντονιην φλεγμονης. Lib. i. p. 38. This author further

further obſerves in the treatiſe, περι κρισιμων. Κην πυρεσσονλι, ιδρως επιγενηλαι μη εκλειπονλος του πυρεϊου, κακον, μηκυνει γαρ ἡ νουσος, και ὑγρασιαν σημαινε. πυρεσσονλι ψυχροι ιδρωλες επιγενομενοι, μακρην τον πυρεϊον σημαινουσι. In the Prorrhetics likewiſe, Οἱ εφιδρωλες και μαλισλα κεφαλην εν οξεσι ὑποδυσφοροι, κακον.—Opinions, ſimilar to thoſe I have mentioned, are found in various parts of this writer's works; and they are particularly illuſtrated by examples, which are recorded in the Epidemics.

5. In ſeveral parts of the works of Hippocrates, we meet with ſome very important ſigns of prognoſtic taken from the ſtate of reſpiration. Εν τοις οξεσι παθεσι τοις μελα πυρεϊου, αἱ κλαυθμωδεες αναπνοαι, κακον, Aphor. lib. vi. 54.—Εν τοις πυρεϊοισι το πνευμα προσκοπλον, κακον, σπασμου γαρ σημαινει. Aph. lib. iv. 67.—Though I am of opinion, that I have ſometimes ſeen the πνευμα προσκοπλον of Hippocrates without ſubſequent convulſion, yet I muſt confeſs that there ſeemed in all ſuch caſes to be a general tendency to ſpaſmodic affection. The ſigns of danger or ſafety, which may be taken from the various affections of reſpiration, are fully explained in the Coan preſages. Πνευμα πυκνον μεν και σμικρον εον, φλεγμονην και πονον, εν τοισι καιριοισι τοποισι σημαινει; μεγα δε και δια πολλου παραφροσυνην; η σπασμον; ψυχρον μεν θανασιμον: θανασιμον δε και πυρεπωδες και λιγυωδες πνευμα, ὁσσον δε του ψυχρου. και το μεγα εξω πνεομενον, σμικρον δε εισω, και το μικρον εξω, μεγα εισω, κακισλον δη και πλησιον θαναλου, και το εκλειπον και καλεπειν, και αμαυρον, και διπλη εισω επανακλησις ὁποιον επειπνευσιν.

6. I ſhall tranſcribe from Hippocrates ſome of the moſt material indications of danger, which may be drawn from the appearance of delirium in fevers. And in the firſt place this author has obſerved τα επιρριγουντα και ες νυκτα μαλλον τι παροξυνομενα, αγρυπνα, φλεβοδονωδεα ουτα εν τοις ὑπνοις, εστιν ὁτε ουρα εφ' εαυτους χαλεπα ες σπασμους αποτελευτα κωματωδειας. Prorrh. 101. Αι εν πυρετοισι εκστασιες σιγωσαι μη αφωνω, ολεθριαι. Coan. preſ. 65. Αι παρα κρουσιες συν φωνη κλαγγωδει, γλωσσης σπασμοι τρομωδιες, και αυται τρομωδεες γενομενοι, εξισταται, σκληρυσμος τουτοισιν ολεθριον. Prorrh. Τα εν φρενιτικοισι νεανικως τρομωδεα, θανασιμα—αι περι αναγκαια παραφροσυναι, κακισται, αι εκ τουτων παροξυνομεναι, ολεθριαι.—αι προεξαδωκαιησαντων παραφροσυναι, κακισται.—Τα παροξυνομενα τροπον σπασμωδεα, κακοχα. Coan. Preſ. There are ſimilar ſentiments in various other parts of this author's works; and though I do not deny that they are in general well founded, yet I muſt likewiſe add, that they appear to be taken frequently from the authority of ſingle caſes. I have myſelf often ſeen many of thoſe ſigns, which Hippocrates conſiders as fatal, where happily the event was more fortunate.

7. Hippocrates has enumerated, in different parts of his works, the various ſigns of danger or ſafety, which may be drawn from the different affections of the vital functions, ſome of which I ſhall tranſcribe. Κακιστον δε μη κοιμασθαι, μητε της νυκτος μητε της ημερης, η γαρ ὑπο οδυνης τε και πονων αγρυπνια· ἡ παραφροσυνη εσται απο τουτεου σημειου. Progn.—Επι αγρυπνιη σπασμος και παραφρο-

συνη, κακον. Aph. lib. vii. 18.—Τα εν κεφαλαλγιησι ωδεα εμεσμαΐα μέλα κωφωσιος ἀγρυπνωδεα, ταχυ εκμαινει.—οἱ εφιδρωΐες, ἀγρυπνοι, ἀναθερμαινομενοι· κακον.—Κωμαΐωδεες, κοπιωδεες, ἀχλυωδεες, ἀγρυπνοι, εφιδρωΐες πυρέῖοι κακοηθεες.—Το καρωδες ἀραγε πανΐαχου κακον Prorrh.—αἱ μέλα καΐαψυξιος δυσφοριαι, κακιστΐαι. Coan. preſ.—Και οἱ παλμοι εν τησι χερσιν πολυχρονιου πυρέῖου σημειον, η χρισεως ξυνΐομου επι το κακιον, και ἐπι τουτων τα τελεισΐα ἅπερ ες θαναΐον. De Criſſib.—Ομμαΐος καΐακλεισις εν οξεσι κακον. Prorrh. —ην γαρ τι ὕποφαινηΐαι του λευκου, &c. Progn. Αἱ μεΐ' εκλυσεως καΐοχως αφωνιαι ολεθριαι, Prorrh.—Αἱ εν τῳ πυρέῖῳ αφωνιαι σπασμωδεα τροπον, εκσΐασαι σιγῃ, ολεθριον. Coan. Preſ.—αἵ μέλα εκλυσεως αφωνιαι, εν πυρέῖῳ οξει ανιδρωΐι, εισι μεν θανασιμοι, ἧσσον δε τω εφιδρωΐι, χρονον δε σημαινει. Ibid.—

8. I ſhall likewiſe tranſcribe from Hippocrates thoſe ſigns of danger or ſafety which are indicated by the ſtate of the eye and countenance. Και τα εν τοισιν σφθαλμοισιν, ην γαρ την αυγην φευγωσιν· η δακρυωσιν απροαιρεΐως, η διασΐρε. φωνΐαι, η θαΐερος θαΐερου ελασσων γινηΐαι, η τα λευκα ερυθρα ισχωσιν, η πελια βλεφαρα, η φλεβια μελανα εν αυΐεοισιν εχωσιν, η λημιαι φαινΐαι περι τας οψιας, η και εναιωρευμενοι, η εξισχοΐες, η εγκοιλοι ιχυρως γινομενοι, η αἱ οψιες αυχμωσαι και αλαμπεις, η το χρωμα του ξυμπανΐος προσωπου πλλοιωμενον η ταυΐα πανΐα κακα νομιζειν και ολεθρια ειναι. Progn.—Προσωπου ευχροια, και το λιαν σκυθρωπον, πονερον. Prorrh.

CHAP. VIII.

1. Τουτο δε οκοταν των οφθαλμων τα λευκα εν αρχῃ μεν της νουσου, αναγκη μελαινεσθαι, εαν ισχυῃ ἡ νουσος. ταυτ' ουν καθαρα γινομενα, τελειην ὑγιειην δηλοι. αἱρεμα μεν βραδυτερον, σφοδρα δε γινομειον θασσον. De Dieb. Crit.

CHAP.

CHAP IX.

1. As I mentioned before that we attain more accurate ideas from the detail of particular caſes than from general hiſtories; I therefore relate the method of cure, which was purſued in thoſe examples which are deſcribed in the ſixth chapter.

1. Lennox.—On the 4th of December, or ſecond day of the diſeaſe, the ſolution of ſalts with a ſmall portion of emetic tartar was given by a wine glaſs full at a time, till it operated plentifully. 5. Some powders of nitre and camphire. 6. Two ſcruples of bark were given every two hours during the remiſſion, with an injunction that the nitrous powders be repeated during the time of the paroxyſm. 11. The above plan was perſiſted in till marks of criſis appeared. Not more than one ounce of bark was given during all the remiſſions.

2. *Henley*. 7. The uſual ſolution of ſalts was given, but without any addition of emetic tartar. It operated plentifully. 8. The bark was begun this morning, with injunctions that it be adminiſtered every two hours during the remiſſions. 9. A Bliſter was applied to the back of the head and neck, with a bolus of camphire, opium, and valerian. Wine was ordered, together with the bark, as ſoon as the remiſſion ſhould begin to appear. This plan was perſiſted

ſiſted in till the criſis arrived, which was on the 13th.

3. Negri. The patient was purged on the 3d with the uſual ſolution of ſalts, to which was added ſo conſiderable a portion of emetic tartar, that it likewiſe operated by vomit. 4. Bark was given in the uſual quantity, and at the uſual intervals. 5. As ſoon as the fever came on, bliſters were applied to the head, and likewiſe to the legs; but they produced no perceivable effect. The patient died, and probably fell a ſacrifice to the diſeaſe, from my not having early enough perceived the malignity of its nature.

4. Thompſon. 4th, The ſolution of ſalts with emetic tartar was adminiſtered in the preſent caſe as it had been done in the others. It operated plentifully, but had no material effect upon the diſeaſe. 5. Saline draughts in the ſtate of effervescence were given frequently. Bark and wine were ordered in the remiſſions, with as much lemonade as the patient choſe to drink. 9. Glyſters of cold water, impregnated with fixed air, were employed two or three times with apparent benefit. 10. the bark, wine, and ſaline draughts were given liberally, yet notwithſtanding, the diſeaſe ſeemed to complete its natural courſe.

5. Cunningham.—6. The nauſea and vomiting were ſo diſtreſſing in the firſt paroxyſm, that, in compliance with the patient's earneſt

earneſt entreaties, I conſented to give an emetic. 7. The ſymptoms were aggravated, and the emetic was repeated but without advantage. 9. Anodynes were given during the paroxyſm with ſaline draughts in the act of effervescence. They moderated the vomiting but did not entirely remove it. Bliſters were applied to the head and legs; bark and wine were given in conſiderable quantity; but the diſeaſe continued till the 14th without material alteration.

CHAP.

CHAP. X.

1. As the cold bathing, which I have ſo ſtrongly recommended in the cure of fevers, has an exterior appearance of being a raſh and hazardous remedy, I ſhall relate ſome caſes which may enable the reader to judge more preciſely of its real effects. Cold-bathing I may remark, appears to have been occaſionally employed by the Greek and Roman phyſicians, after the time of the Emperor Auguſtus; but I was only a young man when I went out to the Weſt Indies, and cannot pretend to ſay that I was acquainted with the writings of thoſe phyſicians, or that I poſſeſſed much knowledge of diſeaſes, except the little that could be retained from a curſory hearing of univerſity lectures. The firſt hints of this practice were therefore accidental, and aroſe from a converſation I had with the maſter of the veſſel, in which I went paſſenger. This perſon commanded a tranſport in the war 1756, and was preſent at the ſiege of Havannah. As he was talking one day of the ſtate of the fleet, he mentioned accidentally, that ſome men were ſent aboard of his ſhip ill of fevers; ſeveral of whom, he obſerved, jumped into the ſea during the delirium which attended the paroxyſms of the diſeaſe. Some of them, as might be expected, were drowned; but the moſt part of thoſe who were recovered from the waves appeared

peared to be greatly benefited by the ducking. The fact, which, from the veracity of the man, I thought I could depend upon, ſtruck me ſtrongly, and I reſolved, in my own mind, to bring it to the teſt of experiment as ſoon as an opportunity ſhould offer: neither was it long after my arrival in Jamaica, that I had occaſion to viſit a ſailor whoſe ſituation ſeemed to juſtify ſuch a trial. The poor man was aboard of a ſhip, which lay at anchor about a mile from the ſhore. He had been ill two days; the delirium ran high; his eyes were red and inflamed; his reſpiration was hurried; he was anxious and reſtleſs in a high degree, whilſt together with thoſe marks of excitement, he was occaſionally languid and diſpoſed to faint. His ſkin being dirty furniſhed an oſtenſible excuſe for trying this remedy. But it was previouſly thought proper to draw ſome blood from the arm; which being done, ſome buckets of ſalt water were daſhed on the ſhoulders. He was now laid in bed: a copious ſweat enſued, ſucceeded by a diſtinct remiſſion, and a total change in the nature of the ſymptoms. The ſucceſs I met with in this inſtance was more than I had expected; I was therefore encouraged to try the ſame mode of bathing in a perſon who came under my care ſome weeks thereafter, and who had been ill of a fever ſix or ſeven days. This patient had been bled and bliſtered; emetics and cathartics had been likewiſe employed, and bark had been given in the uſual manner, for the three laſt days. The

fever, however, had now in a great meaſure loſt its type. The man was low and languid; his eyes were dim; his viſion indiſtinct; his pulſe was ſmall and frequent, and, when the head was raiſed from the pillow, not to be felt. Though it did not appear that he could reaſonably be expected to live long, I ſtill wiſhed to get him conveyed to the deck, that a trial might be made of the effects of cold bathing; but the ſituation was ſo tickliſh, that I felt ſome uneaſineſs in ſetting about it. At laſt he was lifted through the hatch-way in a blanket, though I muſt confeſs that I was not without apprehenſions that he might die under my hands. Some wine was then poured down his throat; and he was ſprinkled with cold ſalt water, as he lay on the deck. Appearing to be ſomewhat invigorated by this proceſs, he was raiſed up very gently, and ſeveral buckets of the ſea-water were daſhed about his head and ſhoulders. He was then laid in bed; the pulſe ſoon became large and full. I left him in a copious ſweat, and was agreeably ſurpriſed next day to find him ſitting on the deck, to which he had walked on his own feet. I ſhall only mention another inſtance of the good effects of cold bathing in the fevers of the Weſt Indies, which is perhaps more deciſive than either of the former. A boy, aged fourteen, had been ill of a fever ſeven or eight days. Nothing had been omitted, in point of treatment, which is uſual to be done in ſimilar caſes. Bark and wine had been carried as far as could be ſerviceable, or even ſafe; yet death ſeemed to be approaching faſt. The

ſucceſs

ſucceſs of cold bathing, in ſome inſtances ſimilar to the preſent, ſo far exceeded my expectation that I was induced to make trial of it in the caſe before me, though I was not altogether without apprehenſions that death might be the conſequence of the attempt. The buſineſs, however, was accompliſhed without accident; and next day the boy was able, not only to ſit up in bed, but even to walk over the floor. After inſtances ſo unequivocal as the above, it would be ſuperfluous to mention any others. I ſhall only add, that I have tried the remedy, in various ſituations, always with ſafety, generally with aſtoniſhing ſucceſs; ſo that I cannot forbear recommending it even at an early period, in the fevers of the Weſt Indies. It communicates tone and vigour to the powers of life, and diminiſhes irritability in a degree far ſuperior to all other cordials or ſedatives. The bathing was managed in the following manner: the water, which was required to be of a refreſhing degree of coolneſs, was generally daſhed by means of a bucket on the head and ſhoulders. It was likewiſe found that its good effects were heightened, in ſome caſes, by previous bleeding, and by the previous uſe of warm bathing. This may ſeem a raſh practice to thoſe who argue without experience; but, ſetting aſide the authority of the ancients, we find it confirmed by the example of a perſon who was not a phyſician, and who, therefore may be ſuppoſed to be leſs under the influence of a favourite opinion from which he might be led to diſguiſe

the truth. Buſbequius, who was ſent on an embaſſy to Soliman the Great, was obliged to travel to Amaſia, where the Sultan then ſojourned. In his return home he was ſeized with a continued fever, and very ſeverely harraſſed by it. The diſeaſe gained ſo much ground during the journey, that he found it neceſſary to ſtop at Conſtantinople to attend to the recovery of his health. The practice which was adopted to effect this may appear to be ſingular, and by many, perhaps, will be thought to be hazardous and raſh. He mentions, that, after enjoying the luxury of warm bathing, he was ſuddenly ſprinkled with cold water. His words are, "Idem, ſcilicet, Quaquelbenus me a balneo exeuntem frigida perfundebat, quæ res etſi erat moleſta, tamen magnopere juvabat." Iter. Conſtant. p. 62.) His phyſician, Quaquelbenus, who ſeems to have been a man of excellent judgement and careful obſervation, had probably learnt the practice in his travels in Aſia, as it does not appear to have been commonly known in Europe at that time.

CHAP.

CHAP. XI.

1. The ſpecies of fevers, which are found in the writings of Hippocrates, are very numerous; and, in many inſtances, appear to have been treated in very different manners.—I ſhall firſt deſcribe his method of proceeding in that ſpecies of the diſeaſe which appears, according to his opinion, to ariſe from obſtruction. Πυρέτοι δὶ αὐτο δε γινονται ὁταν του σωματος ὑπερ φλεγμηναντος αἱ σαρκες ανοιδησωσιν και το φλεγμα και ἡ χολη κατακλεισθεντα ατρεμιζωσι. και μη αναψυχηται μηδεν μητ' εξιον. μητε κινευμενον, μητ' αλλου ὑπιοντος. Ὁποταν κοπος εχῃ και' πυρετος και πλησμονη λουειν χρη πολλω, και χριειν ὑγρον, και θερμαινειν ὡς μαλιςα, ὡς ἡ θερμωλη, ανοιχθεντος του σωματος, ὑπο του ιδρωτος εξελθη. It thus appears to be his firſt view, in the cure of fevers ariſing from the above mentioned cauſe, to excite and to ſupport perſpiration or ſweat. He defines a term for the continuance of this practice: Εξης δ' ευ αυτα ποιειν και τρεις και τεσσαρας ἡμερας, afterwards adding, και ην μη παυηται, φαρμακον πισαι χοληγαγικον, και ψυχειν τον πυρετον, πριν η τεταρταιος η; in which he ſeems to have paſſed ſuddenly from the ſweating to the antiphlogiſtic, or directly refrigerating method of treatment. He next ſubjoins ſome cautions in regard to the management and uſe of remedies: Μηδ' ὡς αν το σωμα θαλλῃ πιπισκειν φαρμακον, ου γαρ κρινονται ει μη σμικρον,

ρον, ὥστε συνοιδεοντος του σωματος· επην δε ισχνος ᾖ πιπισκειν, και ινησεται πυρετω. With regard to diet and drinks, and evacuations, in ſuch ſituations, he obſerves, σιτιον μη προσφερειν, μηδε ῥοφημασιν ὑπεξαγειν, και πιων ὑδωρθερμον και μελικρατον, και οξος συν ὑδατι, ταυθ' δε πιπισκειν ὡς πλειστα, ſubjoining his reaſons, ην γαρ μη ψυχρον εστη το ποτον, θερμον και μενον, εκ του σωματος του νοσεοντος αφαιρει, ην τε διουρηση ην τε δι ιδρωση. παντῃ δε ανοιγμενον τε και αναπνεον και κινουμενον το σωμα συμφερον ποιησει. He now totally changes his views with regard to the nature and cure of the diſeaſe: Επην δε ισχνον εοντα καιῃ, δηλον ὁτι ου δια το φλεγμαινειν ὁ πυρετος εχει. και ην μη παυηται τρεφειν και φλεγμαινειν ποιειν: and appearing ſtill to fluctuate in his intentions, he adds, και ην μηδ' οὑτω ξυμφερῃ, δηλον ὁτι ουκ εχρην τον πυρετον παρεχειν, τουτον χρῃ φαρμακον πισαι ὡς ὑπεξαγῃ, ὁπη αν μαλλον ὁ πυρετος εχη, ην τε κατω ην τε ανω, ην μενανω, ανω, ην δε κατω, κατω—ουδεν δ' ησσον δει τους ασθενεοντας των ισχυρων φαρμακων πιπισκειν, αλλ' ὁμοιως η μουνον οὑτω, τοισι μεν ισχυροισι, ισχυρον, τοισι δ' ασθενεσιν, ασθενες, τας δε πυρωσιας ποτοισι και ῥοφημασιν, ὡσπερ τον πυρετον ψυκτηριῳ φαρμακῳ ελυειν, καμμαρῳ, ῃ τινι αλλῳ τινι τοιουτῳ· και επην ναυτιωτο τω ψυκτηριῳ, θερμαντηροισι χρῳ εξης· επην δε μη παυηται, ψυκτηροισι παλιν χρησθαι. De locis in homine, ſect. iv. p. 418.—The above extract may be conſidered as furniſhing a general outline of the practice of Hippocrates in febrile diſeaſes. In ſome caſes we obſerve him proceeding on a ſuppoſed knowledge of the nature of the cauſe; in others, he appears to attend chiefly to ſymptoms. Fluctuating in his conjectures, and unſtable in the conduct of his practice, he paſſes ſuddenly to the moſt oppoſite

extremes. For as in one inſtance he attacks the ſuppoſed original cauſe; ſo in another he is guided by thoſe ſufferings or ſymptoms which have been uſually ſtyled the efforts of nature. But if ſuch is the general outline of cure, we ſometimes meet with ſomething peculiar in the treatment of the particular ſpecies of the diſeaſe. In a certain ſpecies of the ardent bilious fever, where the force of the diſorder ſeems to have affected the alimentary canal in a more eſpecial manner, he recommends the following method of treatment. Τῳ τοιῳδε δε διδου πινειν, ὑδωρ τε και μελικρητον εφθον, ὑδαρες, ὁκοσον εθελει, κην πικρον το στομα γινηται, εμεειν ξυμφερει, και την κοιλην ὑποκλυσαι, ην δε μη προς ταυθ' λυηται, γαλα ονου εψησας, καθαιρε, αλμυρον δε μηδιν, μηδε δριμυ προσφερειν, ου γαρ ὑποισει, ροφηματα δε εως αν εξω των κρισιμων γενηται μη διδου.— De rat. Vict. in morb. acutis, ſect. iv. p. 396. We find likewiſe that bleeding was recommended by him in fevers of violence. Τα δ' οξεα παθεα, φλεβοτομησεις, ην ισχυρον φαινηται το νοσημα, και οἱ εχοντες ακμαζωσι τῃ ἡλικιῃ, και ρωμη παρῃ αυτεοισιν, ibid. He alſo details very circumſtantially, in pages 398 and 399, the method of proceeding in the ardent or autumnal bilious fever. Θερμης δε καταβασης ες τους ποδας, και ουρου διελθοντος, ην μη ιδρωσῃ, παντα λωφα. κατα τονδε ουν τον καιρον, δει το ροφημα διδοναι· τοτε δε ολεθρος, ὁκοσοισι δε δια τελεος ἡ κοιλη εν τοισιν πυρετοισιν ὑγρῃ, τουτεοισι διαφεροντως τους ποδας θερμαινων και περιστελλων, κηρωμασι και ταινιδιοισι περιελισσων προσεχε, ὁκως μη εσοντα ψυχροτεροι του λοιπου σωματος, θερμοισι δε ουσι, θερμασμα μηδεν προσφερε, αλλα παρατηρει, ὁκως μη ψυχθησονται· ποματι δε χρεεσθαι, ὡς ελαχιστω ὑδατι ψυχρῳ, η μελικρητῳ· Ὁκοσοισι

σοισι δε εν πυρετοισι, κοιλη ὑγρη, και γνωμη τεταραγμενα, και οἱ πολλοι των τοιου των τας κροκιδας αφαιρεουσι, και τας ῥινας σκαπτουσι, και κατα βραχυ μεν αποκρινονται το ερωτωμενον, αυτοι δε αφ' εαυτων ουδεν λεγουσι κατηρ τημενον, δοκεει ουν μοι τα τοιαδε, μελαγχολικα ειναι, ὁσων τοιωνδε εοντων, ην ἡ κοιλη ὑγρη ῃ, και συντηκῃ, δοκεει μοι τα ροφηματα ψυχροτερα και παχωτερα προσφερειν, και τα πομαλα σταλτικα. και οινωδεστερα ῃ στυπτικωτερα. The following deſcription and method of treatment likewiſe deſerves to be attended to, Ὁκοσοισι δε των πυρετων, δινοι τε απ' αρχης και σφυγμοι κεφαλης εισι, και ουρα λεπτα, τουτεοισι προσδεχεσθαι προς τας κρισιας παροξυνομενον τον πυρετον. ου θαυμασαιμι δ' αν, ουδ' ει παραφρονησειαν, οἱσιν εν αρχῃ τα ουρα νεφελοειδεα, ῃ και παχεα, τους τοιουςδε ὑπο καθαιρειν, ην και τα αλλα ξυμφερῃ. ὁκοσοισι δε εν αρχῃ τα ουρα λεππα, μη φαρμακευε τους τοιουτους, αλλ' ην δοκεῃ κλυσαι τουτους· ξυμφερει, οὑτως θεραπευεσθαι τῳ σωματι ἡσυχιην αγοντα, αλειφοντα τε και περιστελλοντα ὁμαλως· ποτῳ δεχρεεσθαι, μελικρητῳ ὑδαρει, και ῥοφηματι, χυλῳ πτισανης ες εσπερην· κοιλη δε ὑπαγε κατ' αρχης κλυσμῳ· φαρμακα δε μη προσαγε τουτοισιν· ην γαρ τι κινησης κατα κοιλην, το ουρον ου πεπαινεται, αλλ' ανιδρος τε και ακριτος ὁ πυρετος επι πολυν χρονον εσται· τα δε ῥοφηματα ὁκοταν εγγυς των κρισιμων ῃ, μη διδου ην θορυβηται, αλλ' ὁταν ανῃ και επιδιδῳ επι το βελτιον, φυλασσεσθαι δεχρη και παντων των πυρετων τας κρισιας, και αφαιρεειν τα ροφηματα κατα τουτον τον καιρον, μεμαθηκασι δε μακροι οἱ πυρετοι οιδε γινεσθαι, και αποσκηματα ισχειν, ην μεν τα κατω ψυχρα ῃ, περι τα ωτα, και τραχηλον, ην δε μη ψυχρα, αλλας ισχει μεταβολας, ῥεει δε και αἱμα εκ ῥινων, και αἱ κοιλιαι τοισι τουτεοισιν εκταρασσονται, ὁκ-

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σοισι δε πυρετοι ασωδεες εισι, και ὑποχονδρια συντεινουσι, και κεκλιμενοι ουκ ανεχονται εν τω αυτεῳ, και τα ακρεα ψυχονται παντα, πλειστης επιμελειας και φυλακης δεονται. διαγειν δε τουτοισι προσφεροντας μηδεν αλλο, ῃ οξυμελι ὑδαρες, ῥοφημα δε μη προσφερε, ἑως αν ληξῃ και το ουρον πεπανθῃ· κατακλινειν δε ες ζοφερα οικηματα· και κατακεκλισθαι ὡς επι μαλθακωτατοισι ςρωμασι, πλειςον χρονον επι τα αυτα καρτεροντα και ὡς ἡκιστα ριπταζειν. μαλιστα γαρ τουτο τους τοιουτους ωφελεει. επι δε το ὑποχονδριον, λινου σπερμα εγχριων επιτιθει, φυλασσομενος ὁκως μη φριξῃ προστιθεμενος, εστω δε ακροχλιαρον, εφθον ὑδατι τῳ ελαιῳ. —Τους δε ακαταστατους των πυρετων, εαν μεχρις, αν καταστωσιν, ὁκοταν δε στωσιν απαντησαι διαιτῃ και θεραπειῃ τῃ προσηκουσῃ, κατα φυσινθεωρεων. He further obſerves, Ὁτι εισι δε οψιες πολλαι των καμνοντων, διο προσεκτεον τῳ ιωμενῳ ὁκως μη διαλησηται τις των προφασιων. μητε των κατα λογισμον, μητε οκοσα ες αριθμον αρτιον, η περισσον δει φανηναι. The different ſpecies of fevers, according to his opinion, appear to be numerous. He deſcribes their diſcriminating marks, and occaſionally adds ſome important obſervations about the method of management. Ὁταν δε τι τουτων παρῃ (pain, ſwelling, &c.) εν ὑποχονδριῳ μεν, μαλιστα λυειν την κοιλην, κλυσμοισι. πινετω δε μελικρητον θερμον αφεψημενον, p. 400. He likewiſe adds ſome remarks on another ſpecies of fever. —Ει δε εν πυρετῳ χειμερινῳ ἡ γλωσσα τρηχειη γενηται, και αψυχιαι ενεωσι, φιλεει τῳ τοιῳδε και επανεσις ειναι του πυρετου· αλλ' ὁμως τον τοιονδε παραφυλασσειν τῃ λιμοκτονιῃ, και τη ὑδατοποσιῃ, και μελικρητου ποσει και χυλοισι παραφυλασσε, μηδε πιστευων τῃ ανεσει των πυρετων, ὅσοι γαρ τοιαδε εχουσι σημεια, επικινδυνοι εισι θνησκειν, ibid. He further diſtinguiſhes fevers by the nature of their ſymptoms, according to

which he varies the method of treatment. In thoſe which are accompanied with irregular determinations, ſpaſms, and delirium, he enjoins, Τους τοιουτους δε μη μεν εξ αρχης φαρμακευειν προαιρη, προ της πεμπτης ην βορβορυζη ἡ κοιλη, ει δε μη, εαν αφαρμακευτον ειναι· ηνδε δια βορβορυζη και τα ὑποχωρηματα χολωδεα ἡ, σκαμμωνιῳ, ὑποκαθαιρε μετριως, τη δε αλλη θεραπειη, ελαχιστα προσφερειν τοματα και ροφηματα, ἱνα βελτιονως εχῃ, ην μη ὑπερβωσι την τεσσαρες και δεκατην, επανιεις, p. 401.—In another, viz. Πυρετῳ λυγγωδει, he recommends οπον σιλφιου, οξυμελι, δαυκον τριψας, πειν διδου, και χαλβανην εν μελιτι, και κυμινον εκλειχτον, πινειν δε τουτοισι διδοναι οξυμελι, ὡς επι τουτοισι ροφειν, αφυκτος δε ὁ τοιουτος, ην μη ιδρωτες κριτικαι και ὑπνοι ὁμαλοι επιγενωνται, και ουρα παχεα και δριμεα καταδραμῃ η εις αποστασιν στηριξη· κοκκαλος και σμυρνα, εκλειχτον, πινειν δε τουτοισι διδοναι, οξυμελι ὡς ελαχιστον, ην δε διψωδεες ωσι σφοδρα, του κριθινου ὑδατος, ibid. In the ſecond book de morbis, this author deſcribes a diſeaſe under the name of bilious fever, which appears to have ſome reſemblance to the endemic of Jamaica, though there are likewiſe ſome circumſtances in the deſcription not uſually found in that complaint, and which I do not well comprehend. Ην χολα ὁ ανθρωπος, πυρετος αὐτον λαμβανει καθημερην, και αφιει, εχει δε μαλιστα το μεσον της ἡμερης, και το στομα πικρον, και ὁταν ασιτος ἡ λυπεει αὐτον. επην δε φαγῃ πνιγεται, και ὑπο ὀλιγων τινων σιτιων εμπιπλαται, και βδελυττεται, και εμεσιαι μιν λαμβανουσιν· και ες οσφυν βαρος εμπιπτει, και ες τα σκελεα, και ὑπνωτης πολλα, τουτον την μεν τα πυρ εξιδρῳ· και οἱ ψυχρος και πολυς ἡ, και του πυρετου μη απαλλασσηται, ἡ καυσος χρονιη

γινεῖαι. ην δε μη ἱδρῳ, θασσον κρινεῖαι, ὁταν οὑτως εχη, επην ενναῖαιος γενηῖαι, φαρμακον διδοναι, ην γαρ αὐλικα αρχομενου του πυρεἱου διδοις, επην καθαρθη επανελαβε πυρεἱος, και αυθις φαρμακου δεἱαι, επην δε το μεν σἱομα μη πονεη, ες νειαρην γασἱερα σἱροφος εμπιπλει, φαρμακον πισαι καλω· και μεἱαπισαι γαλα ονου, η ορρον, η των χυλων τινα, ην δ' ασθενης ἑη, ὑπο κλυσαι, προ δε φαρμακου της πωσιος, ὁς αν πυρε ταινη, ἑωθεν μεν διδοναι μελιχρηἱον ὑδαρες, την δε αλλην ημερην εφ' ἡν ὁ πυρεἱος εχει, ὑδωρ ὁποσον αν θελη διδοναι ψυχρον πινειν, επην δε ανη ὁ πυρεἱος ῥοφαν διδοναι, πἱσανης χυλον, η κεγχρον λεπτον και επιπινειν οινον λευκον οινωδεα, ὑδαρεα, ην δε εμπυρος ἑη, και μη ανη μηἵε της νυκἱης μηἵε τη; ημερης, ψαυομενας δε ην μεν τα αιωθεν εχη θερμα, ἡ κοιλιη δε και αἱ πωδες εισι ψυχροι, και ἡ γλωσσα τρηχεἱη, τουἵω μη δως φαρμακον, αλλ' ὑποκλυζειν μαλθακῳ κλυσμαἵι και διδοναι ῥοφανειν τον χυλον της πἱσσανης, δι; της ημερης, και επιπινειν οινον ὑδαρεα, τον δε αλλον χρονον, πινειν ὑδωρ ὡς ψυχρο ταἵον, ουἵος ην μεν εβδομαιος εξιδρωση και το πυραυἵον μεθη, ην δε μη, τεσσαρες και δεκαἵαιος; αποθνησκει ὡς τα πολλα, p. 473. He likewiſe deſcribes another ſpecies of diſeaſe, which has a near reſemblance to the autumnal bilious fever of the ſouthern provinces of America, particularly in the more unhealthy ſituations. Εξωθεν αφασσομενος, εσἱι βληχρος, εσωθεν δε καιεἱαι, και η γλωσσα αὑἵου τρηχεἱη, και πνει δια των ρινων και του σἱομαἵος θερμον, ὁταν δε πεμπταιος γενηἵαι, τα ὑποχονδρια σκληρα, και οδυνη εσἱι, και ἡ χροιη οιη ὑπο ικτερου εχομενου φαινεἱαι, και ουρεει παχυ και χολωδεες, τουἵον ην μεν εβδομαιον ουἵα ῥιγος λαβη και πυρεἱος ισχυρος και εξιδρωση, ην δε μη· αποθνησκει εβδομαιος η ενναῖαιος. λαμβανει δε μαλισἱα, ην μη το εἱος αυχμηρον γενηἵαι

αὐτη ἡ νουσος· ὁταν οὑτως εχῃ λουειν θερμης εκασης ἡμερης, και πινειν διδοναι, μελικρηπον ὑδαρες πολλον, και ῥοφανειν τον χυλον της πτισανης ψυχρον, δις της ἡμερης, επι δε τῳ ῥοφηματι, πινειν οινον ὑδαρεα, λευκον, ολιγον. ῳ δε ἡ γασπηρ μη υποχωρεῃ, ὑποκλυσαι, η βαλανον προσθειναι, σιλον δε μη προσφερειν, εως αν ὁ πυρετος αιη· επαν δε παυσηται φαρμακον πισαι καπω· ὑποστρεφει γαρ εστιν ὁτε ἡ νουσος, ην ακαθαρτος διαφερηται. Hippocrates, who accuſtomed himſelf to conſider thoſe fevers, which are diſtinguiſhed by ſome formidable ſymptom, as fevers of a diſtinct ſpecies, deſcribes under the name of πυρετος λυγγωδης, a diſeaſe, the cure of which it may not be ſuperfluous to tranſcribe. Πυρετος ισχει σπερχνος, και ριγος και βηξ, και λυγξ. και βησσει αἱμα τῳ σιαλῳ θρομβους αἱματος, και εβδομαιος αποθνησκει. ἡν δε δεκα ἡμερας υπερφυγῃ, ῥαων γινεται, εικοστῃ δε ἡμερῃ εμπυισκεται, και βησσει τας πρωπας ἡμερας πυον ολιγον, επειτα επιπλειον, καθαιρεται δε εν τεσσαρακοντα ἡμερησι. τυπτον τας πρωπας ἡμερας, πιπτουσιν το οξος και το μελι εφθον, και μεταμισγειν οξος και ὑδωρ ὑδαρες πιειν. ῥοφανειν μεν χυλον πτισανης μελι ολιγον μεταμισγων, και οινον επιπινειν λευκον οινωδεα, p. 484. This author has beſtowed the epithet of φονωδες on a diſeaſe, which appears to be one of the worſt forms of the remitting fever of hot climates Πυρετος ισχει και ριγος, και αἱ οφρυες επικρεμασθαι δοκεουσι, και την κεφαλην αλγεει, και εμετι σιαλον θερμον, και χολην πολλην, ενιοτε και κατω ὑποχωρεει, και τους οφθαλμους αἱ χωραι ωχρωρεουσι, και οδυνη ες τον αυχενα, και ες τους βουβωνας ισχει, και δυσθενει και φλυηρεσι. ουτος εβδομαιος, η και προτερον αποθνησκει. ἡν δε ταυτας ὑπερφυγῃ, ὡς

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τα πολλα ὑγιαινει· ἡ δε νουσος θαναλωδης.—Τουτῳ ψυλμαλα χρη προσισχειν, πορος τα σπλαγχνα και πορος την κεφαλην. και πινειν διδοναι ερρηξανλας καχρυς συν τοισιν αχυροισι, και αποβρεχοιλα, και απηθεονλα το ὑδωρ εν τουλῳ μελικρηλον πωιεινλα, ὑδαρες τουλο διδοναι, σιλιον δε μη προσφερειν, μηδε ροφημα επλα ἡμερων αχρις, ην μη ασθενης σοι δοκει ειναι. ην δε ἡ χυλον πωλισανης ψυχρον και λεπλον ολιγον διδοναι δις της ἡμερης, και επιπινειν ὑδωρ, p. 485. We likewiſe find a diſeaſe, deſcribed under the name of πελιος νουσος, of great malignity. Πυρελος ισχει ξηρος, και φριξ αλλοτε και αλλοτε, και την κεφαλην αλγεει, και τα σπλαγχνα οδυνη εχει, και εμεσι χολην, και ὁταν ἡ οδυνη εχει, ου δυνανλαι ανοραν αλλα βαρυνελαι, και ἡ γασληρ σκληρη γινελαι, και ἡ χροιη πελιδνη, και χειλεα και των οφθαλμων τα λευκα πελιδνα, και εξορα ὡς αγχομενος, ενιοτε και την χροιην μελαβαλλει. και εκ πελιδνου ὑποχλωρος γινελαι, τουλον φαρμακον πιπισκειν και καλω και ανω, και ὑποκλυζειν, και απο της κεφαλης αποκαθαιρειν, και θερμω ὡς ἡκιλα λουειν, αλλα και επην λουηλαι ειληθερεα, και ορρον την ὡρον και γαλα ονου πιπισκειν, και σι τισιν ὡς μαλθακωλα τοισι χρησθαι, και ψυχροισιν, απεχομενον των δριμεων και των αλμυρων, λιπαροληροισι δε και γλυκυληροισι και πιοληροισι χρησθω, p. 485. In the book περι παθων, after having deſcribed the Καυσος with much care and exactneſs, he details a method of cure, which appears to be both judicious and bold. Καυσος δε ὁταν εχῃ πυρελος ισχει, και διψα ισχυρη, και ἡ γλωσσα τρηχεια. και μελαινα γινελαι, του πνευμαλος ὑπογε θερμοληλος, και το χρωμα ὑποχολον γινελαι, και τα πλευμονια χολωδεα, και τα μεν εξω, ψυχρος γινελαι, τα

τα δ' εσω, λιαν θερμος, τουτω ξυμφερει ψυγματα προσφερειν, και προς την κοιλην, και εξωθεν προς το σωμα, φυλασσομενος μη φριξῃ. και τατεπομαλα και τα ῥοφηματα διδοναι πυκνα, και κατ' ολιγον ὡς ψυχροτατα. την δεκοιλην θεραπευειν, κην μεν μη ὑποχωρεη τα ενεοντα, κλυσαι, ψυχειν τα κλυσμασι ὡς ψυχροτατοισιν, ἡ ὁσημερας, η δια τριτης, p. 518. He adds likewise an important remark, with regard to the effects of season, in the manner of treating fevers.—Φυλασσεσθαι ουνχρη τους πυρετους τους εν χειμενι, ἡ δε φυλακη αυτων εσται, ἡσυχιη, και ισχνασιη και της κοιλης κενωσις, ῥοφημασι δε και πομασι διαγειν, ὡς αν δ' πυρετος μειωθη. I have thus endeavoured to extract a few passages from the writings of Hippocrates, which may furnish the reader with some ideas, not only of the general principles, but of the particular mode of proceeding which that celebrated physician adopted in the cure of the different species of fevers. The principles, which direct his practice in the different forms of the disease, are various and uncertain. We sometimes perceive endeavours to excite the powers of life, with a view to remove an offending cause as it were by force; sometimes we observe attempts to moderate the excess of re-action; and on certain occasions to extinguish the excessive heat and fever, by means of direct refrigerants: sometimes the business is left chiefly to nature; and sometimes those sufferings, which are usually styled salutary efforts, are purposely increased or promoted.

2. The attempt of Petro to extinguish fevers by copious draughts of cold water, has generally been considered as an invention poste-

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rior to the time of Hippocrates; but an acquaintance with the writings of the Coan ſage does not leave any room to doubt that this remedy was known at an earlier period. Hippocrates, in ſhort, appears to have employed it frequently in the cure of the ardent fever; though Petro, by rendering it more general, and perhaps by improving the management of it in ſuch a manner as to render it more effectual, has uſually been conſidered as the author of the practice. Celſus deſcribes his method of proceeding in the following words: "Siquidem apud antiquos quoque ante Herophilum & Eraſiſtratum, maximeque poſt Hippocratem fuit Petro quidem, qui febricitantem hominem ubi acceperat, multis veſtimentis operiebat, ut ſimul calorem ingentem ſitimque excitaret. Deinde, ubi paulum remitti cœperat febris, aquam frigidam potui dabat: ac ſi moverat ſudorem, explicuiſſe ſe ægrum judicabat; ſi non moverat, plus etiam aquæ frigidæ ingerebat, & tum vonere cogebat. Si alterutro modo febre liberaverat, protinus ſuillam aſſam, & vinum homini dabat. Si non liberaverat, decoquebat aquam ſale adjecto, eamque bibere cogebat, ut vomendo ventrem purgaret." Lib. iii. c. 9. Galen likewiſe bears teſtimony to this method of treatment, in the treatiſe "De Secta Optima," p. 22. ΠΕΤΡΟΝΑΣ δε και κρεα ὑεια οπτα διδοι ϗ οινον μελανα ακρα τεςερον· εμειν αναγκαζε, και ὑδωρ ψυχρον εδιδου πινειν ὁσον ηθελον. Since the time of Petro and Cleophantus till very lately, we do not find that there have been any practitioners

titioners who have ventured to prescribe strong animal food to patients labouring under acute fevers. The other part of the process, viz. the drenching with cold water, has prevailed, more or less, in different countries and in different ages from a very early period till the present time. With the Greeks it appears to have been a remedy of common use. Galen particularly lays great stress upon it, and details very exactly the manner in which it ought to be conducted; some part of which it may not be superfluous to transcribe.—Επ' αλλου δε κατα τον αυτον χρονον, ὁς ἡμιν εαυτον επε τρεψε, καθ' εκαστην τροφην εδιδομεν ακραιφνους πηγαιου ψυχρου, ποτε μεν δυο κυαθους, εστι δε ὁτε τρεις, αθροον γαρ οἱ τοιουτοι ψυχρον ου φερουσιν ανευ του βλαβηναι. διο καλλιστον εστιν ευθυς εν τῳ πρωτῳ παροξυσμῳ, διαγοντα του πυρετου την ιδεαν, ακινδυνωτερον χρησασθαι ψυχρῳ πλεονι, μηδεπω ξηρων ἱκανως των σωματων γεγονοτων.—Ὁ γουν εκ θυμου πυρεξας εν τοις ὑπο κυνα καυμασι, θερμος και ξηρος νεανισκος, εν τῳ πρωτῳ παροξυσμῳ πιων ὑδατος ψυχρον δυο κοτυλας, αυτικα μεν εμεσε χολην ξανθοτα την, εξεκρινε δ' ολιγον ὑστερον και κατω, καπειτ' αυθις επι τῃ τροφῃ λαβω ὁμοιως ὑδατος οσον κοτυλης, ουκετι επυρεξεν. With regard, however, to this practice, he adds, Πολλης γαρ ακριβειας δειται κατα το μετρον επι των ὁυτως εχοντων, ἡδοσις του ψυχρου. De curat. morb. lib. 10. The Arabians were likewise great advocates for the practice of giving cold water in fevers; and there are some of them who seem to have carried the use of it to a very great length. Avicenna observes,

وربما

و ربما سقي الطبيب العليل من الما
البارد قدرا كثيرا حتي يخضر لونه و
يرعد و لو لليمنا و نصف Tom. ii. p. 12.

The phyſician frequently drenches his patient with cold water in ſo great exceſs, that the colour becomes pale (literally green) and he ſhrinks or ſhudders in conſequence of the quantity of this cold liquor.—The quantity which was required to produce this effect (he obſerves) might not be leſs than a pint and a half. The drinking of cold water in fevers is ſtill, I believe, a practice in the iſlands of the Mediterranean, in ſome parts of Italy, in Spain and Portugal; and, though now laid aſide in moſt of the Northern countries of Europe, it appears actually to have been in high eſtimation with the moſt eminent phyſicians of Germany during the two laſt centuries. Lommius profeſſes to have cured fevers frequently by this method. Curavi equidem hac via ægros haud ſanè paucos, qui cum ad ſtatum perveniſſent continuæ febris, ac ſumma ſiti, ſummiſque ardoribus affectarentur, rogati bibere ne cupiant, oſtenſum (quo creſceret bibendi deſiderium) fontem, ipſi in lympham intentiſſimi, ubi ſemel atque iterum, ad libras tres quatuorve, avidè hauſiſſent, paulo poſt dejicere vel vomere cæperunt flaviſſimam cum epota aqua bilem. Poſt quæ reclinati, ac probè operti, mox uberrimis ſudoribus, totas noctes, vel etiam altiſſimè dormientes, defluxerunt, quibus finitis, omnem in

poſterum amiſerunt febricitationem. De cur. rand. febr. c. xi. ſ. iii. But beſides theſe teſtimonies of phyſicians, in favour of the practice of drenching with cold water, the memoirs of Baron Trenck furniſh us with a curious and very convincing proof of the efficacy of this remedy, in extinguiſhing, almoſt like a charm, the violence of a burning fever. The Baron, when ill of a fever in the priſon at Madgeborough, unfortunately broke the pitcher which contained his daily allowance of water. The fever was violent, and he ſuffered the moſt unexpreſſible torments of thirſt, for the ſpace of twenty-four hours. When the uſual ſupply was brought to him next day, he ſeized the pitcher with eagerneſs, and drank the water with ſuch avidity, and in ſo great quantity as is ſcarcely credible. The conſequence was a total removal of the diſeaſe. To this I might add an inſtance, which happened to myſelf at Savanna in Georgia, in the year 1779. In the exceſſive hot weather of the month of July, I was ſeized with the endemic of the country, in a more violent degree than was commonly ſeen. In the third paroxyſm of the diſeaſe, my deſire for cold water was ravenous. A pitcher of it was drawn from the pump, which I drank off inſtantly, without the leaſt abatement of the thirſt. The draught was repeated in a few minutes, in quantity not leſs than a quart. The thirſt was effectually quenched, and the fever ſeemed to vaniſh. But though the fever appeared to be extinguiſhed, as it were by a charm; yet the ſtomach and hypochondria became diſtended, yellowneſs of the

eye

eye and countenance ſucceeded, with a conſiderable degree of debility which remained for two or three days. I muſt, however, remark with regard to this caſe, that the effects were not the ſame as they have been uſually reported to be by authors. The fever was extinguiſhed; but neither vomiting, ſweat, or any other ſenſible evacuation enſued. The Ancients, I may further obſerve, ſeem to have adminiſtered cold drink only in the advanced ſtate of fever, when ſigns of coction began to appear; in which caſe, it is impoſſible to form a certain opinion of its preciſe ſucceſs. That cold water may be employed with effect, it is neceſſary that the thirſt be intenſe, perhaps that it be purpoſely provoked, and that it be fully and completely ſatiated. If managed in this manner, it probably will not often fail of extinguiſhing the fever; yet I muſt not omit to mention, that unleſs it is managed with a great deal of caution and judgement, it may alſo often irrecoverably extinguiſh the powers of life.

3. The writings of Eraſiſtratus being unfortunately loſt, we can only collect from thoſe writers who have come down to us ſome ſcattered fragments of his ſyſtem of practice. We do not perceive that he had written any thing expreſsly againſt bleeding, which had been employed frequently by his predeceſſors in various diſeaſes; but we find from the treatiſes, which Galen has written againſt this author and his followers, that the remedy was neglected in thoſe complaints, where formerly it had been

principally depended upon. Such is the case, and it appears extremely odd, that while he considered fever as arising from plethora, he should omit bleeding, which so directly and evidently obviates this effect. Abstinence and certain degrees of exercise are the great remedies, by means of which the disciples of the Erasistrateian school endeavoured to remove plethora; and consequently to restore the health of the patient. The system of practice, which was adopted by this set of men, furnishes us with a strong instance of the small importance of the various innovations, perhaps of the little utility of the medical art. Straton, a very strenuous advocate for the practice of Erasistratus, remarks, ταῦτ' αλλα φησιν εκεινος Ερασιςρατον επαινεισθαι δικαιον εςι, και ὁτι χωρις φλεβοτομιας εθεραπευεν ἁ μετα του φλεβοτομειν οἱ προσθεν επεχειρουν ιασθαι προς Ερασις. τους εν Ρωμῃ, Tom. iv. p. 8. a very small degree of merit, in my opinion, as stating an innovation without any real improvement.—Those who wish to know more about Erasistratus, may consult Galen—προς Ερασις. και προς Ερασ. τους εν Ρωμη.

4. Though Asclepiades may, perhaps, be considered as the first, who established the general practice of taking the business out of the hands of nature; yet there appear to have been some of the still more ancient physicians, who occasionally attempted to cut short the course of fevers abruptly. Phillip of Acarnania, the physician of Alexander the Great, stopt the course

courſe of a violent ardent fever, which that conqueror caught from bathing in the river Cydnus, or from exceſs of fatigue in hot weather. The means appear to have been violent; but unfortunately we do not know what they actually were. Vid. Arrian. lib. xi. p. 66. edit. Gronov. Plutarch. Vit. Alexand.

5. We muſt not, perhaps, depend implicitly on the authority of Celſus for hiſtorical fact. Though friction and warm bathing were not probably employed at Rome before the time of Aſclepiades; yet they ſeem to have been commonly known in Greece long before this period. In the Journal of the Life of Alexander, the progreſs of the diſeaſe, which proved fatal to that celebrated warrior, is very accurately detailed; and we find that bathing, or the air of the bath, was a uſual remedy on account of the fever. [Plutar. in Vit. Alex.] The writings of Aſclepiades are not now to be found; but many of his moſt important innovations have been tranſmitted to us by Celſus and Cælius Aurelianus, the principal of which it may not be ſuperfluous to tranſcribe. Antiqui, medicamentis quibuſdam datis, concoctionem moliebantur; eo quod cruditatem maxime horrebant: deinde eam materiam quæ lædere videbatur, ducendo ſæpius alvum ſubtrahebant. Aſclepiades medicamenta ſuſtulit; alvum non toties, ſed ferè tamen in omni morbo ſubduxit. Febre vero ipſa præcipue ſe ad remedium, uti profeſſus eſt. Convellendas etiam vires ægri putavit, luce, vigilia, ſiti ingenti, ſic, ut ne os quidem

quidem primis diebus elui ſineret. Quò magis falluntur, qui per omnia jucundam ejus diſciplinam eſſe concipiunt. Etenim ulterioribus quidem diebus cubantis etiam luxuriæ ſubſcripſit, primis vero tortoris vicem exhibuit.—Aſclepiades ubi ægrum triduo per omnia fatigaverat, quartum diem cibo deſtinaverat, lib. iii. c. iv. Celſus likewiſe adds, in the xivth chap. of the xiith book, that this author's communia auxilia frictionem, vinum, et geſtationem eſſe. With regard to geſtation he obſerves, Aſclepiades etiam in recenti vehementique, præcipuè ardente febre, ad diſcutiendam eam, geſtatione dixit utendum. Sed id periculoſe fit; meliuſque in quiete ejuſmodi impetus ſuſtinetur, cxv. Cælius Aurelianus likewiſe records ſome particulars in his mode of proceeding in the cure of fevers, which it may not be improper to mention. Vinum jubet febricitantibus dari, ſed adjecta diſcretione. Impari denique die adhibendum probavit primo clyſterem, et jugiter adhibendum. Non etiam ſitim vehementem, donec pulſus concidat, probat: etenim opportunitatem temporis fieri magis ab artifice poſſe quam ſua ſponte, aut deorum nutu venire. Appellavit denique illam magnificam. Item in Samothracia clyſterem, atque vomitum probat, circa veſperam pridie. Sed in his qui periodicis typis afficiuntur, vomitum præponit clyſteri. Item lue ægrotantibus vomitum et lavacrum probat. Typicis vero, clyſterem et vomitum, et vinum Samothracium, atque ſalſum bibendum inquit, primo uſque ad tres quartas ſextarii, et ſuperbibendam partem ſextarii. Item

tempus

tempus dandi cibi non dimiſſione perfecta, ſed acceſſionis declinatione dicit. Et quoſdam prima die, quoſdam ſecunda, quoſdam tertia, quoſdam quarta vel quinta, aut ſeptima cibari jubet, lib. i, c. xiv.

6. Euphorbus and Antonius Muſa appear to have been the firſt, who employed cold bathing in the cure of febrile diſeaſes; at leaſt the latter is the firſt, who ventured to try the practice at Rome. The experiment was made on the perſon of the Emperor Auguſtus. The fact is related by the hiſtorians Suetonius and Dio Caſſius. Graves, et periculoſas valetudines per omnem vitam aliquot expertus eſt, (Auguſtus) præcipue Cantabria domita, cum etiam deſtillationibus, jecinore vitiato, ad deſperationem redactus, contrariam et ancipitem rationem medendi neceſſario ſubiit, quia calida fomenta non proderant, frigidis curari coactus auctore Antonio Muſa. Sueton. Oct. Auguſt. c. lxxxi. Dio Caſſius adds more explicitly, ψυχρολουσιαις και ψυχροποσιαις ανεσωσε. lib. liii. p. 725, edit. Reimar. It thus appears from the hiſtory of the introduction of this remedy into medical practice, that we owe the diſcovery to random experiment, rather than to any induction of reaſoning. Cold bathing indeed, according to the theory which prevailed at that time, might be naturally expected to increaſe the force and obſtinacy of the diſeaſe. Its effects, however, were fortunate in the preſent inſtance; and the perſon who had recommended it, met with honour and great reward. Και δια τουτο

και

και χρηματα παρα του Αυγουστου και παρα της βουλης πολλα, και το χρυσοις δακτυλοις χρησθαι, την τε ατελειαν και ἑαυτῳ, και τοις ὁμοτεχνοις, ουχ ὁτι τοις τοτε ουσιν, αλλ' και τοις επειτα εσομενοις, ελαβεν. Dio, Tom. i. p. 725.

7. Sæpe igitur ex aqua frigida, cui oleum sit adjectum, corpus ejus pertractandum est, quoniam interdum sic evenit, ut horror oriatur, et fiat initium quoddam novi motus; exque eo, cum magis corpus incaluit, sequatur etiam remissio. Celsus de curatione lentarum febrium, Lib. iii. c. ix.

8. Hi regebant fata (scilicet Thessalus et Crenas) cum repente civitatem Charmis ex eadem Massilia invasit, damnatis non solum prioribus medicis, verum et balineis: frigidaque etiam hibernis algoribus lavari persuasit. Mersit ægros in lacus. Videbamus senes Consulares usque in ostentationem figentes. Plin. Hist. Nat. Lib. xxix. e. v. This practice was probably followed in the cure of fevers.

9. Galen. oper. de curatione Morb. Lib. viii, & ix.

10. Avicen. oper.

BIBLIOTHECA BODLEIANA

—Rhazes.

11. In support of this opinion, I shall mention a case, which fell under my own observation about a twelvemonth ago. I was called to

young man, a ſailor, ill of a fever of a very dangerous and alarming kind. It was the eighth day of the diſeaſe before I ſaw him. He had not been hitherto in the leaſt benefited by any thing that was tried; neither did any remedy, which I could think of, though employed with almoſt deſperate boldneſs, in any degree check the progreſs of the diſeaſe. The power of ſpeech was loſt, and even ſwallowing was performed with difficulty; the eye was languid, nay almoſt without motion; the countenance was ghaſtly; and many livid ſpots, ſome of them nearly the ſize of a ſix-pence, made their appearance on different parts of the body. I propoſed bathing, and the friends of the young man, conſidering the ſituation as deſperate, conſented that I ſhould make a trial of it; more, perhaps, to comply with my deſire, than from expectation of any benefit that might reſult from it. But in ſetting about it, it unfortunately happened, that an utenſil proper for the purpoſe could not be procured, ſo that we were compelled to be contented with a general fomentation. This was applied in as complete a manner as circumſtances would permit. A blanket was ſoaked in warm ſalt water, and the body was wrapped in it from head to foot. In a ſhort time the ſkin became ſoft and warm, ſweat began to flow; the eye and countenance, began to reſume their animation, which had been almoſt extinguiſhed, the pulſe roſe; ſwallowing was performed with leſs difficulty; and next day the colour of the ſpots was evidently brighter. So far the change was favourable; but a regular ſupply of wine and cordials

having been neglected during the following night, the pulſe ſunk, and things returned nearly to their former ſituation. The fomentation was again repeated, in conſequence of which the extremities and ſurface of the ſkin became warm and moiſt, an effect which was no ſooner produced, than the blanket was ſuddenly removed, and the face and breaſt, particularly, were ſprinkled with cold water, in which a large portion of ſalt was diſſolved. The cold had the effect to cauſe the patient to ſhrink at the firſt, yet in a ſhort time he appeared to be refreſhed very remarkably. The powers of life grew gradually ſtronger; though the marks of criſis were not very evident for ſeveral days. To the above I might add ſome other inſtances, where effects were ſimilar; but I avoid ſwelling the notes to too great extent, by entering into particular details. I ſhall therefore only obſerve in general, that cold bathing was uſually of ſervice. It imparted general tone and vigour to the powers of life, and by increaſing the activity of the vaſcular ſyſtem, probably ſometimes rendered the criſis complete, where it naturally would not have been ſo; but I cannot venture to ſay that I ever carried it ſo far that the diſeaſe could be ſaid to be precipitately extinguiſhed by it.

12. Celſus has not much claim to new ideas in the manner of conducting the cure of febrile diſeaſes, yet it will be neceſſary to give a ſhort view of his method of proceeding, which appears to be every where judicious, and in many parts important. Ego autem, medicamentorum dari potiones, et alvum

vum duci non nisi rara debere, concedo. Et id non ideo tamen agendum, ut ægri vires convellantur, existimo; quoniam ex imbecillitate summum periculum est. Minui ergo tantum materiam superantem oportet, quæ naturaliter digeritur, ubi nihil novi accedit. Itaque abstinendus a cibo primis diebus est, et in luce habendus æger (nisi infirmus) interdiu, quoniam corpus ista quoque digerit: isque cubare quam maximo conclavi debet. Lib. iii. c. iv.

Quod ad sitim vero somnumque pertinet, moderandum est, ut interdiu vigilet; noctu, si fieri potest, conquiescat; ac neque potet, neque nimium siti crucietur. Ibid.—Optimum medicamentum vero est, opportune cibus datus, ibid. There had long been a dispute among physicians about the most proper time of giving food in fevers. Our author, after mentioning the different opinions, makes the following remark.—Tutissimum est autem, ante totius accessionis tempus præterire: quamvis, ubi longa fuit febris, potest indulgeri ægro maturius, dum tamen ante minimum pars dimidia prætereatur. Ibid. circa finem.—He further adds, in the following chapter, Cibum quam maxime semper ab accessione futura reducere. It may not be improper to mention his views and principles with regard to the manner of giving drink to persons labouring under fevers. Hæc (febris) etenim sitim accendit, et tum maxime aquam exigit, cum illa periculosissima est. Sed docendus æger est, ubi febris conquieverit, protinus

tinus ſitim quoque quieturam: longioremque acceſſionem fieri, ſi quod ei datum fuerit alimentum.—c. vi. This practice has often been followed; but it appears to have ariſen from a miſtaken theory, and when carried far has probably done conſiderable harm. An exception is afterwards added to this general rule of abſtaining from drinking, copied from Heraclides of Tarentum: Ubi aut bilis ægrum, aut cruditas male habet; expedire quoque per modicas potiones miſceri novam materiam corruptæ. Ibid.—The above are ſome of the general views of Celſus in the cure of febrile diſeaſes. In the treatment of the particular ſpecies, we meet with remarks of conſiderable importance. He obſerves in the peſtilential fever, Minime utile eſt, aut fame, aut medicamentis uti, aut ducere alvum. Si vires ſinunt ſanguinem mittere optimum eſt; præcipue, ſi cum ardore febris eſt. Si id parum tutum eſt, ubi febris aut tenuata eſt, aut levata, vomitu pectus purgare. Sed in hoc maturius, quam in aliis morbis, ducere in balneum opus eſt: vinum calidum, et meraclus dare, et omnia glutinoſa: inter quæ quoque carnem, generis ejuſdem, &c. c. vii. The cure of the ardent fever appears to be conducted with a good deal of judgement. Si vero ardens febris extorret, nulla medicamenti danda potio eſt; ſed in ipſis acceſſionibus oleo et aqua refrigerandus eſt.—Etiam amplo conclavi tenendus, quo multum eſt purum aerem trahere poſſit; neque multis veſtimentis ſtrangulandus, ſed admodum levibus tantum velandus eſt. Poſſunt etiam ſuper ſtomachum imponi folia vitis in aqua

aqua frigida tincta. Ac ne ſiti quidem nimia vexandus eſt. Alendus maturius, id eſt a die tertio, et ante cibum iiſdem perungendus. Si pituita in ſtomacho coit, inclinata jam acceſſione, vomere cogendus eſt; et tunc dandum frigidum olus, aut pomum, ex his quæ ſtomacho conveniunt.—Cum vero in ſummo incremento morbus eſt, utique non ante diem quartum, magna ſiti antecedente, frigida aqua copioſe præſtanda eſt, ut bibat etiam ultra ſatietatem; et cum jam venter et præcordia ultra modum repleta, ſatiſque refrigerata ſunt, vomere debet. Quidem ne vomitum quidem exigunt; ſed ipſa aqua frigida, tantum ad ſatietatem data, pro medicamento utuntur. Ubi utrum libet factum eſt, multa veſte operiendus eſt, et collocandus, ut dormiat. Fereque poſt longam ſitim et vigiliam, poſt multam ſatietatem, poſt infractum calorem, plenus ſomnus venit; per quem ingens ſudor effunditur, idque præſentiſſimum auxilium eſt. In the cure of the ſlow fever he aſſumes a bold and very important principle, viz. In hoc caſu medici cura eſſe debet, ut morbum mutet. Sæpe igitur ex aqua frigida, cui oleum ſit adjectum, corpus ejus pertractandum eſt, quoniam interdum ſic evenit, ut horror oriatur, et fiat initium quoddam novi motus.—In his frictio quoque ex oleo et ſale ſalubris videtur. C. ix.

13. In the firſt place I ſhall mention an example of Galen's method of treating the ephemera. A perſon was ſeized with a fever after bathing in the ſtyptic waters, called Αλβουλα. He was attended

attended by ſome diſtinguiſhed phyſicians of the Eraſiſtrateian, as well as of the methodic ſchool, who all agreed in enjoining abſtinence for the ſpace of three days. Galen adopted a different plan, ſome part of which I ſhall tranſcribe. Ου μεν ειασαμεν γε ἡμεις χωρισθεντων αυτων ελθοντες, αλλ' εις βαλανειον εισαγαγοντες ευθεως, και χλιαρον ελαιον επιπλειστον αυτῳ περιχεαντες, αναλριψαντες τε πραοτατα, το πλειστον του χρονου μερος εν τω της θερμης δεξαμενης ὑδατι διατριβειν εκελευσαμεν. ειτα εξελθοντα και χρησαμενον ὑδατι ψυχρῳ κατα τα ειωθοτα, σκεπασαντες σινδονι, και βραχυ καθισαι κελευσαντες ὡς ανακτησασθαι την δυναμιν, αυθις εισαγαγοντες εις το βαλανειον, ὁμοιως τε παλιν αλειψαντες τε και τριψαντες και κατα το θερμον ὑδωρ χρονισαι κελευσαντες, ειθ' αυθις εξαγαγοντες και τῳ ψυχρῳ βαψαντες, απομαξαντες τε, τροφην εδωκαμεν, αυτικα μεν εξελθοντι μετα το πιειν ὑδατος, πτισανης χυλον. ειτα βραχυ διαλειποντες θριδακην· και μετ' αυτην, εξ απλου λευκου ξωμου των ἁπαλοσαρκων ιχθυων, οἱοπερ οἱ πετραιοι παντες εισι, και οἱ ονισκοι καλουμενοι. De Curat. Morb. Lib. viii. Tom. iv. p. 119. edit. Baſil. The above affords an example of the cure of a fever, which the author ſuppoſes to have ariſen from obſtruction or ςεγνωσις. The method of treatment was ſucceſsful, and having been carried on without the knowledge of the other phyſicians, who had ſtrictly enjoined a contrary plan, ſerved to turn their doctrines into ridicule. Obſtruction, I may obſerve, in the opinion of Galen, is properly conſidered as the cauſe of the ephemera; yet he likewiſe adds, that obſtruction may be ſo modified, as occaſionally to give riſe to fevers of a continued kind. I ſhall relate an example of this, of which

which the cure is detailed very minutely in the abovementioned treatiſe. Τον τοινυν γυμναϛικον νεανισκον αρξαμενον πυρετειν ωρας πρωϊης της νυκϛης, εθεασαμεθα καϊα την επιουσαν ημεραν ωρας του τριϊης· ευροϊϛες δε πυρειον ικανως μεν θερμον, αλλα και τους τε σφυγμους ομαλους και μεγιϛους, και ταχεις και πυκνους και σφοδρους, και την της θερμασιας ποιοτηϊα το δια βραδιϊκον της αφης ουκ εχουσαν· ειι δε και τα ουρα τη τε συϛασει και τη χροια τυν καϊα φυσιν ου πανυ λειπομενα, πυθομενοϛ τε του των γυμνασιων εθους ημεληκοϊα τον ανθρωπον ημεραις ως τριακονϊα, τη δε προϊεραια μονη γεγυμνασθαι σφοδρϊερον μεν, αλλ' ουκ επι πολυ, προσεκην εχθαι τε τα συνηθη σϊλια, και ταυϊα πεπεφθαι μεν αλλα βραδεως και μογις, ως αν επιγενομενου καϊα την εσπεραν του πυρειου. Φαινομενου δε ερυθρου και μεσϊου ανθρωπου, και μεν τοι και πληρωσεως αυϊῳ τινα αισθησιν ειναι λεγονϊος, εν τουϊῳ τε φθιγξαμενος περι φλεβοϊομιας των παροϊων τινος, εδοξεν ημιν ακαβαλλεσθαι την περι του βοηθημαϊος σκεψιν εις ϊερον καιρον. αμα μεν ινα ακριβεϛερον διαγνωμεν εκ ποιου γενους εϛιν ο πυρειος, αμα δ' εξ αναγκης δια την προγεγενημενην βραδυπεψιαν· επει δε και καϊα την εσπεραν ομοιως ακμαζειν ο πυρειος εφαινειο μηδεν αφαιρων αισθητως, υποπιος ην ηδη συνεχος υπαρχειν επι εμφραξει τε και πολυαιμια, και τη δια το πληθος των σαρκων σϊεγνωσει. Δια φυλαχθεινος δε του μεγεθους ϊσου δι' ολης της νυκτος, επιϊης υϛεραιας εδοκει τοις επισκοπουμενοις αυϊον ϊαϊροις απασι φλεβοϊομητεον ειναι. σϊασεως δ' εγινομενης περι του καιρου, και κρα τησανϊων των επι την επιουσαν αναβαλλεσθαι συμβουλευοϊων, ο πυρειος εναργως εφανη δι' ολης της ημερας επακμαζων εαυϊῳ· κατειϊα τη; επιουσης νυκϊος της τριϊης, αλλος μεν ουκ εγενειο παροξυσμος ως προς· το πρωϊον εξ αναλογιας, αφορητον δ' ην το καυμα τῳ καμνονϊι, και τασις ολου του σωμαϊος ως πεπληρωμενου. και σφυγμους της κεφαλης, αγρυπνιαν τε δια

ταυϊα

ταυτα δεινη. και μεταριπτουντος ἑαυτον αλλοτ' εις αλλο σχημα του νεανισκου.— και τοινυν ὡς ουκετ' εφερεν, ὡρας του της νυκτος· ογδοης εκπεμψας οικετην προς με, δειται παρ' αυτον αφικεσθαι δια ταχεων, ὑπακουω δη και απερχομαι, και καταλαμβανω θερμοτατον τε τον πυρετον, και τους σφυγμους οἱους εμπροσθεν ειπον. επει δ' ουτ' εν τουτοις, ουτ' εν τοις ουροις, ουτ' εν αυτῃ τῃ της θερμοτητος ποιοτητι σημειον τι σηπεδονος εφαινετο χυμων, εδοκει καλλιον ειναι τεμειν την φλεβα, πριν αρξασθαι την σηψιν. Αφαιρω τοινυν αυτου τοσουτον εξεπιτηδες, ὡς λειποθυμιαν επιγενεσθαι. μεγιστον τι βοηθημα τουτο πυρετων συχνων εν ισχυρᾳ δυναμει, και τῳ λογῳ και τῃ πειρᾳ δεδιδαγμενος. πρωτον μεν γαρ εις εναντιαν καταστασιν αφικνειται ταχιστα ψυχομενον εν τῃ λειποθυμιᾳ το σωμα. τουτου δ' ουτε τοις καμνουσιν, ουδ' αυτῃ τῃ διοικουσῃ τα ζωα φυσει δυναιτ' αν τις εὑρειν ἡδιον η χρηστοτερον· επειτα δ' εξ αναγκης εν τοις τοιουτοις σωμασι ἑπεται διαχωρησις γαστρος, εστι δε ὁτε και χολης εμετος, εφ' οἱς αυτικα νοτιδες απο παντος του σωματος, η ιδρωτες. ἁπερ ουν κακεινῳ πανθ' ἑξης γενομενα, παραχρημα τον πυρετον εσβεσαν. ὡστε τινας των παροντων ειπειν, εσφαξας, ανθρωπε, τον πυρετον, επι τουτου μεν δη παντες εγελασαμεν· ὁπως δε πληρωσαιμι την διηγησιν, ουδεν αν ειη χειρον ολιγα προσθειναι· μετα δυο γαρ της φλεβοτομιας ὡρας βραχυ τι προδους τροφης τῳ καμνοντι, και κελευσας ἡσυχαζειν, απηλλαττομεν· αφικομενος δε πεμπτης ὡρας της ἡμερας, οὑτω βαθεως ὑπνουτα κατελαβον, ὡς απτομενου μου μηδ' ολως αισθανεσθαι. λεγοντων δε και των ὑπηρετουμενων αυτῳ βαθυν οὑτως ειναι τον ὑπνον. ὡς μηδ' ὁταν αποματτωσιν αυτου τας νοτιδας εξεγειρεσθαι, συνεβουλευον οὑτω πραττειν, ειναι γαρ ακριβως ηδη τον ανθρωπον απυρετον· αφικομενος δ' αυθις ὡρας δεκατης, εὑρον ἑτι και τοτε κοιμωμενον αυτον· εξελθων δε παλιν επ' αλλους αῤῥωστους, επανηλθον ὡρας πρωτης νυκτος, ουκετι μετα σιωπης, αλλ' εξεπιτηδες μεγα φθεγγομενος,

ὅπως ὁ καμνων διεγερθειη του ὑπνου. και τοινυν οὑτω γενομενου, πλισανης χυλῳ μονῳ θρειψας αυτον, απηλλατομεν. επιμελησας δε την ὑστεραιαν, επι το λουτρον απελουσα τη μετ' αυτην,—τα μεν δη καλα τουτον ουτως επραχθη. In the above inſtance we perceive a very minute detail of Galen's manner of treating the inflammatory fever, accompanied with plethora. The bleeding appears at firſt to have extinguiſhed the fever abruptly; yet we muſt not omit to obſerve, that the period, at which this remedy was employed, was in ſome degree a critical one, as alſo, that the patient ſeemed to be then in a ſituation, which frequently precedes a criſis. The ſame author has likewiſe furniſhed us with an example of the cure of a fever, where the diſeaſe was ſuppoſed to ariſe from putrefaction. The ſubject of this diſeaſe was a ſlave. Δι' ὁλης της ἡμερης εκεινος ὁ ανθρωπος καμων πολλα, και πειλα λουσαμενος, ολιγα τε προσενεγκαμενος, ὑπηρξαλο πυρετειν εν τη νυκτι, συναψας αὐτη και την επομενην ἡμεραν, εθεασαμεθα δ' ἡμεις αυτον μεσα την δευτεραν νυκτα, τα μεν ουν αλλα πανλα, τῳ προειρημενῳ παραπλησιως διακειμενον, εναργη δε τα της σηπεδονος των χυμων εχονλα γνωρισμαλα. φλεβα τοινυν αυτῳ παραχρημα διελονλες, αχρι λειποθυμιας εκενωσαμεν, εφ' ἡ διαλειπονλες αυλαρκες, εθρεψαμεν, μελικρατῳ μεν πρωτον, μεσα δε ὡραν εκεινου μιαν, πλισανης χυλῳ, και πανλα επεπρακτο ταυτα πεμπτης ὡρας ενλος, ὁμοιω ε δε αυτῳ διαμενονλος πυρετου, συνοχον ειναι προσεδοκησαμεν επι σηψει. και τοινυν και ὁυτως απεβη. Διασαμενοι γαρ αυτον ὡρας του δευτερας νυκτος εν ισω μεγεθει, τον δια τριτης παροξυσμον ἡξοι γ' εσομενον η ου εσομενον, ακριβως ηβουληθημεν παραφυλαξαι νυκτος ὡραν ἑβδομην την ὑστατον εχονλα, αρθρου δη βαθεος επι τον ανθρωπον ελθονλες, ευρομεν ὁπερ ηλπισαμεν. ουτε γαρ ὁ δια

τριτης εγεγονει παροξυσμος, εφαινετο τε βραχυτι μικροτερος ὁ πυρετος, ȣ κατελειπομεν επι της εσπερας· ὡς δε και της μεσημβριας ιδων αυτον, ην ηδη βεβαιοτατος αφαιρειν τι βραχυ και συνοχον ειναι παρακμαστικον, αμεινον εδοκει θρεψαι και τοθ' ὁμοιως τον ανθρωπον, διελθουσης δε και της τεταρτης νυκτος εναργως ελαττων ἑαυτου κατα την τεταρτην ἡμεραν ην, εν ἡ παλιν ὁμοιως αυτον θρεψαντες, ηκολουθησαμεν αφαιρουντι του μεγεθους, δι' ολης της ἡμερας εκεινης και της επιουσης νυκτος της πεμπτης, ὡστε εναργως τῃ πεμπτῃ των ἡμερων. ελαττονα φαινεσθαι του προσθεν, αναλογον δέ τη μειωσει του πυρετου και ἡ των ουρων πεψις προυχωρει. και ην δηλον ὡς κατα την ἑβδομην ἡμεραν παυσαιτο, και ὁυτως εγενετο, παρακμαστικος ουν ακριβως ούτος ἡμιν ὁ συνοχος επι σηψει χυμων ωφθη. De Curat. Morb. lib. ix. tom. iv. p. 131. The ſame effects did not follow the bleeding in this inſtance, as were obſerved in the preceding. The diſeaſe ſtill ſubſiſted, and its future cure was truſted to the gradual operations of coction and criſis, attention being paid to the ſupporting of the powers of life. In page 133, our author adds, Ιαματα δε συνοχων πυρετων δυο ταυτ' εστι μεγιστα, φλεβοτομια και ψυχρον, αλλ' εκεινη μεν εν παντι καιρῳ, φερουσης γε της δυναμεως, ἡ δε του ψυχρου ποσις, ὁταν μεν εν τοις σφυγμοις και τοις ουροις, τα της πεψεως εναργη σημεια βλεπης. It appears to have been cuſtomary with all the ancient phyſicians to avoid giving nouriſhment, not only during the actual preſence of the paroxyſm of a fever, but even in the period preceding its approach. Galen adopted a contrary conduct, and relates a caſe, in proof of his practice, which, as being curious, I ſhall here tranſcribe. He obſerves, that a young man after uſing exerciſe to fatigue, to which was added

ſome

ſome uneaſineſs and agitation of mind, returned home exhauſted and overcome with thirſt. Ὑδαρὸς οὖν, ὡς εἰωθει ποιων, εἰπειδη μηδεν εγιγνετο κρειττον, αλλ' επεξεινετο τα της ακωμαλιας αὐτῳ, τουτο μεν εμεσεν. αμεινον δ' ὑπολαβων ειναι μηδεπω τρεφεσθαι, καταπλινε τοτε και ἡσυχαζε ὡρας σχεδον τι της ἡμερας ενδεκατης. τουτο ποιησας, αγρυπνησας δε μετα του πυρεξαι δι' ολης της νυκτος, ἡσυχαζε κατα την επιουσαν αχρι μεσημβριας, ιασασθαι την αγρυπνιαν ελπιζων. ἡνικα δε τινες αὐτον ιατροι της διαιτητου θεασαμενοι, κατα μεν το παρον εφασαν αξιολογον ειναι πυρετον, εις εσπεραν δ' αυθις οψεσθαι, και τοινυν και θεασαμενοι παλιν ἑσπερας παρακμαζοντα τον πυρετον, ουκ ηξιωσαν ουδε το τε θρεψαι, ταυτοι γ' αλλου τινος ιατρου συμβουλευοντος, αλλα ανετησαν εκεινοι γενναιως. ει μεν γαρ απυρετος εγεγονει, ταχυ αν αὐτῳ δουναι τροφην ειπονες, ει δε πυρετττοι, ουκ αν δουναι, και τοινυν και καθαπην τριτην ἡμεραν, ἑωθεν αφικομενοι, την διαιτητον ὑπερβαλλειν ηξιουν. ην δε ὡς ειρηται περι τρισθεν ἡ ὑποπτος ὡρα της ἡμερας εκεινης ενδεκατη. χωρισθεντων ουν αὐτων, εγω παραγενομενος, εθεασαμην του νεανισκου το προσωπον οἱονπερ ὁ Ἱπποκρατης εν προγνωστικῳ γραφει δια της δε της ῥησεως. ῥις ὀξεια, ὀφθαλμοι κοιλοι. και ταλλα ὁπερ ἱσμεν εφεξης αὐτῳ ειρημενα. παντως ουν αὐτον αλωσεσθαι πυρετῳ. ἑκτικῳ τε και μαρασμωδει μη τραφεντα, πεισας εμαυτον ὁτι ταχιστα παρασκευασας εκ χονδρου ῥοφημα διδωμι προσενεγκασθαι, αλλ' ὁμως και τοι τουτο προσενεγκαμενος, ουδεν ἡττον εν τω καιρω του παραξυσμου περι την ενδεκατην ὡραν εισβαλλοντος, απεψυχθη τε τα ακρα δυσεκθερμαντως, και ὁ σφυγμος αὐτῳ μικρος και ασθενεστατος εσχατως εγενετο, διο δη και κατα την τελευτην ἡμεραν ἑωθεν τε και εις εσπεραν, εδωκα τροφην αὐτῳ. την δυναμιν ανακτωμενος, και τον αυχμον του σωματος επιλεγ-

γων, ην γαρ αὐλῳ το δερμα καρφαλεον ὡσπερ βυρσα, διαμενοντος δε του πυρετου λεπτου και ὁμοιου καθα την πεμπτην αυθις ἡμεραν εδικαιωσε τρεφειν αὐτον, ουχ ἁπλως ῥοφημασιν ὡς εμπροσθεν, αλλα και κοκκους ὁποιας εμβαλων ες χονδρον ἐξ ὑδατος θερμου χωρις ἁλυσεως.— Ενθα δη και μαλιστα την ανοιαν η την φιλονεικιαν, η ουκ οιδ' ὁτι φῶ, των την διαιτητον, αὐτον εν αρχῃ κελευσαντων ὑπερβαλειν, ακριβως ην καταμαθειν, εναργως γαρ τοι φαινομενον πασι, ὡς ουκ αν εις την τελευτην ἡμεραν δ' ανθρωπος αφικτο, μη τραφεις προ του καθα την τριτην παραξυσμου. κακως εκεινοι και τοτε και τοις εφεξης ἡμεραις εφασαν αὐτον τεθραφθαι. Galen, however, perſiſted in the plan which he had adopted of giving nouriſhment on the days of the paroxyſms; and at laſt made an experiment of the danger, and fallacy of the opinion of the diatritarii, who had hitherto loudly blamed his method of proceeding. It was now the eleventh day of the diſeaſe; and the patient had been treated in ſuch a manner, that our author was ſatisfied the conſtitution poſſeſſed internal ſtrength ſufficient to withſtand the effects of one paroxyſm, though the practice of giving food previous to the attack of the paroxyſm were omitted for once. He therefore obſerves, that Επεθρεψαμεν ὑπερβαλλειν αὐτον τας παροξυντικας ὡρας. ασφυξιας ουν εν αὐταις γενομενης παντως, και καταψυξεως ισχυρας ὁλου του σωματος, ὡς μητε φθεγγεσθαι μηκετι, και μογις των θλιβοντων αισθανεσθαι, κληθεντες ἁμα παντες οἱ ἐξ αρχης ὁρωντες ιατροι, μονονου διασπαθηναι προς των οικειων του καμνοντος εκινδυνευσαμεν. εγω μεν ὡς ἑκων προδους την σωτηριαν αὐτου δια φιλονεικιαν, οἱ δ' ερασται της διαιτης δια την αμαθιαν, ἁμα δε και αναισθησιαν. εκεινοι μεν

αχρωτεροι

αχρωτεροι και ψυχροτεροι του νοσουντος αυτου γενομενοι, μηχανην τινα εβουλευσαντο φυγης. προνοησας δ' εγω τουτο. την αυλειαν θυραν εκελευσα κλεισθηναι, και τινι των εταιρων προσεταξα λαβοντι την κλειν φυλαττειν. ειτ' εν μεσῳ καταστας ηδη μεν ουν ὑμας εφην ακριβως πεπεισθαι τις εστιν ὁ σωσας τον ανθρωπον αχρι του δευρο. σωθησεται δε και νυν ὑφ' ἡμων.—Τουτ' ειπων και διαστησας τας γναθους αυτου, εγχεων πτισσανης χυλον δι' αγγειου στενοστομου κυαθων το πληθος τριων, ειτ' ολιγον ὑστερον οινου λευκου λεπτου κεκραμενου συμμετρως θερμου κυαθους, εφ' οἱς αναβλαψε, τε και ακουειν και φθεγγεσθαι και γνωριζειν τους παροντας ὑπηρξατο, προτερον, οἱονπερ ξυλον ξηρον εκτεταμενος, αναισθητως τε και αφωνος. αυθις ουν αυτῳ δους αρτι τι καταπιειν εξ οινου καθ' ὁν ειρηται τροπον κεκραμενου, τελεως ανεκτησαμην, ibid. p. 140, 141. This may be considered as a decided proof of the propriety of giving nourishment, not only in the period preceding the paroxysm, but even during the time of its actual presence.—It was observed in the preceding part of this work, that Petro was esteemed the author of the practice of extinguishing fever, by the means of cold drink. Galen appears to have adopted the idea; and in p. 143, relates a case, where it was followed with success. Ὁ γουν εκ θυμου πυρεξας εν τοις ὑπο Κυνα καυμασι, θερμος και ξηρος νεανισκος εν τῳ πρωτῳ παροξυσμῳ πιων ὑδατος ψυχρου δυο κοτυλας, αυτικα μεν εμεσε χολην ξανθοτατην. εξεκρινε δ' ολιγον ὑστερον και κατω. καπειτα αυθις επι τῃ τροφῃ λαβων ὁμοιως ὑδατος ὁσον κοτυλης, ουκετι επυρεζεν. The above is an instance where the drinking of cold water appears to have extinguished fever;

yet the time of giving it is not the ſame as is uſually enjoined.

In the tenth book we find the cure of the hectic or habitual fever very fully treated of. Directly refrigerating powers are chiefly truſted to, and the mode of managing them is very amply detailed.—Practitioners may learn ſome uſeful hints from it. The eleventh book is employed on the cure of fevers, which depend upon putrefaction. The principal indications are, Το μεν ηδη διεφθαρμενον, εκκενουντες απαντι τροπω, το δε υπολοιπον, αιωρησεσι μετριαις και διαπνοαις ευτυχεσιν εις την ακμιαιαν συμμετριαν επανασαγαγοντες, p. 154.

I have thus given a few extracts from the Therapeutics of Galen, a work which deſerves to be more generally known than it appears to be at preſent. Though the principles, which this author has aſſumed, are ſometimes without foundation; and though the ſubſequent reaſonings are not unfrequently embarraſſed or inconcluſive; yet the views of practice are generally clear and judicious. It ſeems to be faſhionable with the moderns to treat the medical knowledge of the ancients with contempt; but I much doubt, if the moſt celebrated phyſicians of the preſent day can boaſt of more diſcernment in diſcovering the nature of diſeaſes, or of greater ſucceſs in curing them, than the author whom I have quoted.

14. Be-

14. Beſides the general ſyſtem of practice of Galen, we find in the works of Aetius an extract from Philumenus, concerning the cure of the ardent fever. Edit. Ald. p. 86.

15. Ε δ' αρα συμξη γενεσθαι τωολλην αγρυπνιαν τω καμνονλι, τηνικαυλα την δια κωδειων αυλοις αυλιδολον επι διδοναι δει, και γαρ μελα το τωοθηναι, ὑπνον εμποιει, και το σφοδρον και το δικαες αμβλυνει των τωυρελων, ει δ' αρα και τοις νοθοις (αιμαλικοις τωυρελοις) επιδιδοναι δεηθειης αυλην, δι αγρυπνιαν η τωαραφροσυνην οχλουσαν τω καμνονλι, ολιγον αυλω τωροσπλεξας απομελλος, ουτως επιδοδου. ουτω γαρ ου φοβηθης μη τη ψυξει τωαχυλερον εργασηλαι την ὑλην το φαρμακον. Lib. xii. p. 213. edit. Goupyl. This is the firſt inſtance where I have found opium mentioned as a remedy in fevers. Of late years it has come into frequent uſe; and there are ſome who truſt chiefly to it in the cure of fevers of the low and nervous kind. I do not exactly know who is to be conſidered as the author of the practice. Opium appears to have been given often during the laſt century; and the practitioners of the Weſt Indies employ it with great freedom in many diſorders. I myſelf have given it in fevers, in very large doſes with ſignal good effects; but I muſt alſo confeſs, that I employed it only as an occaſional remedy. I never conſidered it as alone ſufficient for the cure of the diſeaſe.

16. Beſides the above writers, I might mention Palladius, who appears to have been a profeſſor of the medical art in the ſchool of Alexandria;

andria; though we cannot determine preciſely at what period of time he lived. He ſeems, however, to have been poſterior to Galen, not only as he mentions his name, but as his ſynopſis on fevers carries with it ſtrong evidence of having been compiled from the works of that celebrated author. Palladius, though very conciſe, is clear and methodical in his arrangement, and conſiders the following as the principal indications in the cure of diſeaſes in general. Και τριτος μεν και κοινος σκοπος εστιν επι παντων νοσημαλων, ως απεριτπον και ευπνουν ειναι το σωμα. δευτερος δε εφεξης το τρος την δυναστευουσαν αιτιαν απομαχεσθαι. τριαν γαρ εργων Ιατρου επανορθωτικον εστι των τερι το σωμα σφαλματων, p. 94.

17. In the works of Avicenna we find a great many diviſions of fevers, a variety of indications, and many different methods of accompliſhing them. It would be tedious to tranſcribe the whole. I ſhall therefore only mention the general principles of cure in that ſpecies of fever, which he ſuppoſes to ariſe from putrefaction, with ſome remarks on the manner of conducting the antiphlogiſtic plan in acute diſeaſes,

اعلم ان الغرض في مداواة هذة الحميات تارة يتجه نحو الحمي فيحتاج ان يبرد و يرطب و تارة نحو المادة حين يحتاج ان تنضج او يحتاج ان يستفرغ

Re-

Remember, ſays he, that the indication in the cure of thoſe fevers is ſometimes directed ſolely to the fever, ſo that it is neceſſary principally to uſe cooling and diluting remedies; ſometimes it is directed to the matter or offending cauſe, in which caſe the proceſs of concoction muſt be encouraged, or various means of evacuation employed. He follows up theſe different views at conſiderable length; and in many inſtances with much judgement and deciſion. Fen. 1. Tract ii. c. 7. Tom. ii. edit. Medic. In the tenth chapter he treats of the cure of acute fevers. His ideas are important, and his manner of executing them is elegant and bold. The antiphlogiſtic proceſs is particularly ſo.

و اما وجوه تطفية شدة الحرارة فيكون
بتبريد الهوا و تبريد الغذا و الطلية و الضماد
ات و بالادوية بامساك مثل لعاب بزر قطونا
و لعاب حب السفرجل و عصارة بقلة الحمقا
و رب السوس في الفم ليسكن العطش فان
تعاهد حلق صاحب المرض الحاد ليبقي
رطبا و لايجف من المهمات النافعة جدا
و ربما انتفعوا با ستعمال الحقن المتخذة
من عصارة البطيخ الهندي و القثا و القرع

و الحمقا بدهن الورد مع شي من الكافور انتفاعا عظيما فيجب ان يكون الهوا مبردا ما امكن و تبريده بمنع الزحمة و بتعليق المراوح الكثيرة و ينضد الجمد الكثير — و اذا نصبت فيه الغوارات و الرشاشات و سال فيه ما عذب او كان المضجع علي بركة مغطاة شباك و كان الفرش الذي ينام عليه من الطبري و نحوه و كان ساير الفرش من اطراف الخالف و السفرجل و الريحان المرشوش عليه ما الورد &c.

And now the extinguiſhing or moderating the exceſſive heat is accompliſhed by the following means, viz. by cooling the air, by refrigerating food, by the application of cooling fomentations, or plaſters, and by means of medicines endued with a repreſſing power, ſuch as the pulp of pſyllium, the pulp of quinces, the juice of purſlain, and the juice of liquorice, kept in the mouth, with a view to quench the thirſt. Be careful, therefore, that the mouth and fauceus of patients, labouring under acute illneſſes, be preſerved in a moiſt ſtate; that they be not ſuffered to become dry is one of the views which is highly neceſſary to be attended to. Great benefit will likewiſe frequently ariſe from the employment

of

of glyſters, compounded of the juice of Indian melons, of cucumbers, of gourds, or of purſlain, with the oil of roſes, and a ſmall addition of camphire. It will moreover be required, that the air be cooled as much as poſſible. This will be accompliſhed by forbidding a croud of people to enter into the apartment of the ſick, by the ſuſpending a number of ventilators in it, or by heaping up a quantity of ſnow.—And it will ſometimes be ſerviceable, that freſh water be cauſed to bubble up as from a fountain, that it be ſprinkled on the floor of the chamber, or that a ſtream be conducted through the apartment. It will alſo be proper, that the patient's couch be placed upon a veſſel filled with cold water, and covered with a frame of wickerwork; that the bed upon which he ſleeps be of Tabarum, or ſuch like: and that the other couches, upon which he occaſionally reclines, be prepared of the tops of willows, of quinces, and odoriferous herbs, ſprinkled with roſe-water, &c. Beſides the above directions, with regard to the manner of refreſhing the air, a liſt of foods of the moſt cooling kinds is added. The uſe of embrocations and plaſters, compoſed of various ſorts of cooling ſimples is likewiſe mentioned, with a remark of ſome importance, which at preſent does not ſeem to be much attended to, viz.

وتنطيل الكبد بالمبردات اعظم شي وانفعه

i. e. It is a thing of great importance, and highly uſeful, to embrocate the region of the liver with cooling applications. After defining the circumſtances which require, or which forbid applications of this nature, he concludes with a remark reſpecting the uſe of opiates, which I ſhall repeat in his own words:

و ربما كان لشراب الجشخاش موقع عجيب في تخثير المادة الرقيقة فتنضج و في التنويم

i. e. And thus the ſyrup of poppies frequently produces ſingular good effects, by inſpiſſating the thin humours; it promotes digeſtion or coction, and the benefits of ſleep. It appears from this paſſage, that opium was employed by the Arabians in the cure of fevers, though it does not appear that it was employed with the ſame intentions, or in the ſame circumſtances, as it is now uſed by many of the moderns. The effects, which Alexander and Avicenna ſeem to have expected from opium, were chiefly refrigerating. It was ſuppoſed to moderate increaſed action. We now truſt much to it as a cordial and antiſpaſmodic; but are cautious of employing it, where there exiſt marks of inflammatory diatheſis in the ſyſtem, either general or local.

18. Though medical writers often deliver rules for the treatment of diſeaſes with plauſibility

ſibility and confidence, it is only from the actual application of them that we are enabled to judge of their merit. There is not any Arabian phyſician, with whom I am acquainted, who has furniſhed us with the hiſtory and treatment of a ſingle caſe of fever, from which we might have it in our power to judge of the judiciouſneſs, or of the ſucceſs, of his practice. This defect, indeed, is in ſome meaſure ſupplied by Bohadin, the hiſtorian of the illuſtrious Saladin, who deſcribes with great minuteneſs the hiſtory of the diſeaſe which proved fatal to that celebrated perſonage, and who does not, perhaps, omit any of the means which were employed for his relief. I ſhall tranſcribe from the work ſuch circumſtances of the diſeaſe, as may ſerve to give ſome idea of the manner of treating fevers among the phyſicians of the Eaſt at that period.

و لما كانت ليلة السبت وجد كلا عظيما
فما تنصف الليل حتي غشيه حمي صفراوية
كانت في باطنه اكثر من ظاهره —— ثم
اخذ المرض في تزايد من حينيذ ——
و راي الطبا فصده ففصدوه في الرابع فاشتد
مرضه —— في سادس مرضه و اسندنا ظهره
الي مخدة و احضر لما فاترا ليشربه عقيب
شرب دوا ليلين الطبيعة —— و اشتد مرضه
في

في سادس و السابع و الثامن و لم يزل
يتزايد و يغيب ذهنه و لما كان التاسع
حدثت به غشية و امتنع من تناول المشروب
——و لما كان العاشر من مرضه حقن
دفعتين و حصل من الحقن راحة و
حصل بعض الحقف و تنوال ما الشعير
مقد ارا صالحا

i. e. Saladin felt an uncommon degree of laſſitude, as the ſeventh night commenced; and before the middle of that night was paſt, was ſeized with a bilious fever, the internal force of which was greater than ſeemed to be indicated by the external ſigns.—From that period, viz. the firſt day, the diſeaſe increaſed in violence.—The phyſicians determined upon bleeding; and accordingly that operation was performed on the fourth day; but the complaint was aggravated in conſequence of it.—On the ſixth, while we were ſupporting him with a pillow at his back, ſome warm water was preſented to him, for the purpoſe of waſhing down a laxative diluting potion. —The diſeaſe increaſed in violence on the ſixth, ſeventh, and eighth; and there not being the leaſt abatement at any time, the intellect became deranged. He fainted on the ninth; and thus was unable to ſwallow even liquids.—Two glyſters were adminiſtered during the tenth,

tenth, which procured him ſome relief. Some intervals of reaſon enſued; and he drank a ſufficient quantity of barley-water.—We do not perceive that any thing farther was attempted. Sweating, in a degree aſtoniſhingly profuſe, made its appearance on the evening of the tenth; and the patient yielded to the violence of the diſeaſe on the morning of the thirteenth. If we believe that this caſe furniſhes a fair example of the practice of the Arabian phyſicians in the thirteenth century, we may certainly congratulate ourſelves in having made conſiderable improvements. We certainly ſhould not think we had done our duty, if we ſuffered a patient to die without attempting ſomething further for his relief, than bleeding, glyſters, or a draught of barley-water.

19. I ſhall mention a few circumſtances of this author's manner of proceeding in the cure of fevers.—Intentio enim perpetua naturæ, ſanandis febribus, eſt per ſudores, cap. iv.—After condemning the practices of bleeding, purging, bliſtering, and even giving glyſters, he adds,—Unica nimirum falce amputatur omnium febrium cauſa occaſionalis. Id remedium eſt ſudoriferum, quod incidit, extenuat, reſolvit, liquat, abradit, et ſimul abſtergit cauſam occaſionalem, ubicunque locorum ea demum exſtiterit. Eſtque univerſalis febrium medicina, diaphoretica quidem, inſenſibiliter et citra ſudorem, præfatos effectus patrans, cap. xiv.—He has deſcribed this wonderful remedy; the præcipitatus diaphoreticus of Paracelſus; but there

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is not any body, I believe, who has been fortunate enough to prepare it with ſucceſs. He has alſo recommended very ſtrongly the uſe of wine in the chapter de diæta; his words are remarkable.—Nam quotquot modice vino utuntur in febribus, facilius convaleſcunt, vires conſervant, et in priſtinum ocius reſtituuntur.—In cæteris vero febribus, diaphoretica quæ incidunt, diſſolvunt et abſtergunt. Et utrobique quidem hoc negotium per calida completur. Vinum autem habet peculiarem indicationem: non ſolum quia vires addit, quibus natura exoſam materiam domat; verum inſuper, quod ſit plauſtrum medica minum conveniens. Cap. xii. Tract. de febr.

20. Caſus xli. Propuella febre quotidiana laborante, a pituita et bile in inteſtino tenui circa lumbos inter ſeſe efferveſcentibus) quæ efferveſcentia oritur a ſpiritu acido pituitæ juncto cum ſale lixivioſo bilis, unde frigus in regione lumborum toto in corpore: dolor capitis acris in dextra parte—hic eſt a vaporibus bilioſis, et tandem anguſtia circa præcordia.—℞ Aq. fænic. unc. ii. Aq. Theriac. ſimp. unc. i. Acet. diſtillat. dr. vi. Antimon. dirphoret. ſemidr. ſyr. quinque radici unc. Laud. opiat. gr. ii. miſc. Sumatur cochleatim.—Caſus lxi. Vir quidem per quinque ſeptimanas febre laboravit, hodie a 6. matut. ad horas 12 duravit paroxyſmus, aura frigida lumbos et viſcera corripit, quæ quaſi contorqueri videntur, nihil edere poteſt; ſaporem ingratum in ore ſentit, ſitit omni tempore, præſertim durante calore, dolores ventris patitur, quaſi dilacerantes;

tes; a calore, capitis augetur dolor: de dolore capitis et ventris conqueritur præcipue.—Ad reſtituendum igitur ægrum humores ſunt alterandi, et qui abundant educendi; ſed quia humor viſcidus prius alterari debet, antequam educatur; ſi vero alteratione non poſſumus curare, educendus et evacuandus eſt. Medicamenta ſunt gummata, et alia quæ ſale volatili abundant, ut amara et omnia aromatica. In febribus intermittentibus duo ſunt animadvertenda, morbus ſcilicet totus, et ſinguli paroxyſmi, quibus aliquid præſcribendum. ℞ Aq. Fœnicul. Theriac. ſimp. a. ſemun. ſpirit. Nitri guttas vi. ſyr. quinque radic. ſemunc. f. hauſtus, quem aſſumat, ingruente paroxſmo. Medicamentum quod extra paroxyſmum aſſumat, quod ſitim tollat et dolorem ſedet, eſt tale. R. Aq. Theriac. ſ.—Fœnic. a. ſemunc. ſpir. Nitri guttas viii. ſyr. Diacod. ſemunc pro hauſtu. Quia autem æger debilis R. Aq. Fœnic. unc. ii. Tinct. Cinnam. ſemunc ſpir. Nitri. guttas xv. Laud. opiat. gr. ii. ſyr. quinqu. radicum unc. i. aſſumat cochleatim. A few days afterwards, he made trial of the following form.—R. Aq. Borrag. unc iii. Aq. cinnam. unc i. Acet. ſtillat. dr. x. Ocu. Cancror ſemidr. Antim. diaphoret. ſcrup. i. Laud. opiat. grii. ſyr. de ſuc acetos unc. i. ſumat cochleatim. The diſeaſe went on to increaſe: detergents, cholagogues, and hydragogues, were tried without benefit; and the patient died on the 20th of December, about forty days after he had been admitted into the hoſpital. Theſe two caſes afford a tolerable view of the ordinary practice of Sylvius; while they likewiſe afford an inſtance of the uncertainty of popular repu-

tation. Few men were more eſteemed by his contemporary countrymen than Sylvius de le Boe; and few men have been more blamed by poſterity: in both inſtances, perhaps, with equal injuſtice. As far as we are able to judge, his remedies were not of ſuch a powerful kind as to do either much good or harm.

21. That the reader may have a better idea of this author's manner of proceeding in the cure of fevers, I ſhall tranſcribe two caſes where he ſeems to have exerted his beſt judgement. 1. Nobilis matrona, 50 circiter annos nata, gracili corporis habitu, ſtatura humili, facie rubicunda prædita, cum Junii die decimo quinto ob æſtivum calorem veſtes ſolito tenuiores indueret, veſpere male habuit, inde nauſea et oppreſſione ventriculi afficitur, dolores ſentit vagos, modo in ſcapula, modo in dorſo urgentes, ſitibunda, ſine calore tamen immodico. —Die ſecundo & tertio fere ad eundem modum, die quarto poſt vomitorium, ſcilicet infuſ. croci metall. 1. unciam exhibitum, quater vomuit bilem flavam, ac ter alvo ſoluta, allevari viſa: nocte inſequenti aliquanto melius dormivit: die autem proximo, febre per totum accenſa, de ſiti, præcordiorum æſtu, de dolore modo in latere, modo in dorſo, conquerebatur: protinus ſanguis mittebatur ad 8 uncias, erat urina rubedinis valde ſaturæ, opaca et turbida, ſine hypoſtaſi, aut contentorum ſubſidentia, pulſus inæqualis, et ſæpe intermittens, nox inſequuta inſomnis. Die morbi ſexto, primo mane erupit ſudor exiguus, unde calor nonnihil ſedatior, qui veſperi iterum intendetur: die ſeptimo calor

calor valde acutus, cum ſiti, æſtu, pulſuinordinato, et intermittente, necnon ſumma inquietudine, et jactatione totius corporis. Octavo, ſymptomata erant nonnihil remiſſiora, etiam in urina hypoſtaſeos veſtigia quædam: cæpit iſto die ſerum lactis cum foliis ulmariæ incoctis, copioſé ſu davit, et febris judicata eſt. Totæ ægrotationis tempore pro victu tantum exhibebantur cervifia tenuis, ſerum lactis, decocta hordeacea, aut avenacea: Enemata erant crebi uſus; potus et Julapia refrigerantia pro libitu concedebantur. In this caſe we obſerve ſome approaches to the antiphlogiſtic plan.

2. Juvenis ſtudioſus in ætate 25 circiter annorum, vultus luridi, et temperamenti melancholici, ſine manifeſta occaſione, Auguſti 1656 ægrotare cæpit. primo de intemperie febrili cum ſiti, laſſitudine ſpontanea, et inappetentia conquerebatur: die ſecundo inſuper de dolore in latere dextro, et diſtenſione utriuſque hypochondrii, item vomitu fere continuo, vigiliis, et immani capitis dolore; die tertio medico accerſito, illico ſanguinis ad uncias 12 mittebatur: veſperi magis incaluit et deliravit; poſtea ſudore licet exiguo, ſuccedente, mane proximo melius habuit.—Die quarto iterum ingeſta quævis ſtatim rejecit, item continuo fere vomendi nixu tentabatur. Vomitorii exhibitionem a medico propoſitum, tum æger, tum amici, periculo prius edocti renuerunt. Ab enemate injecto ſex habuit ſedes, et parum allevari viſus eſt: etiam nocte inſequenti aliquantum dormivit. Die quinto iterum vomitio crebra cum

ſiti intolerabili; intus æſtuabat, ſed caloris immodici ſenſus exterius haud tactu perceptibilis, quoniam cruoris efferveſcentis recrementa, quæ per cutem exhalare debuerant, intus reſtagnare et in viſcera exundare videbantur. Ideo veſperi ad provocandam diaphoreſin hic bolus exhibebatur. R. Conſerv. Roſar vitriolat. dr. i. Pulv. Gaſconic. ſcr. i. Laudan. ſolut. in aq. Meliſ. gr. i. iſta nocte mediocriter dormivit, et a ſudore copioſo ſuccedente, ſymptomata mitigari viſa: nihilominus die ſexto cuncta iterum exacerbari; et octavo pulſus erat inæqualis et inordinatus, plerumque deliré loquebatur; et ſi in lecto commoveretur, crebro in ſyncopen incidit. Die nono eadem reſtabant ſymptomata, inſuper tendinum in carpis contractione, aliarumque partium motibus convulſivis tentabatur, ut pene de ſalute deſperaremus. Iſto mane quoniam natura victas manus tradiſſe viſa eſt, quantum erat artis ſuccurendum reſtabat: quare diaphoreſin copioſam velut ultimum refugium intendens ſpr. c. cervi dr. i. in hauſtu Julapii cardiaci una vice propinavi: exinde per quatuor horas valde inquietus et furibundus vix in lecto contineri potuit. Poſtea tamen ſomno obrepente plurimum ſudavit, et res extra periculi aleam ſubito conſtitit. Nocte in ſequenti pro continuanda diaphoreſi, quibuſlibet ſex horis doſin pulveris contraervæ exhibendam præcepi, febris et affectiones nervoſi generis brevi ceſſabant, et æger convaluit. Tract. de febr. cxi. p. 92, 94 & 95. From the above caſe we obtain a tolerably diſtinct view of the practice of Dr. Willis, in the management of fevers. Bleeding, antimonial vomits,

vomits, glyſters, cooling regimen, moderate ſupport in every ſtage, and laſtly ſtimulating diaphoretics, in the late periods of the diſeaſe, comprehend the ſum of this author's practice.

22. In the depuratory fever of the years 1661, 1662, 1663, and 1664, we find little material deviation, from the practice of the times. The forms of Sydenham after bleeding are Infuſ. Croc. Metall. dr. vi. Oxymel. Scillit. et Syr. Scabios. com. a ſemunc. m. f. emet. After the operation of the emetic he recommends an anodyne. R. Aq. Papav. rheæd. unc. ii. Aq. Mirab. dr. ii. ſyr. de Mecon. et ſyr. Papav. errat. a ſemunc. m. f. hauſtus. Where glyſters are neceſſary he employs the common decoction, and towards the latter periods of the fever has recourſe to cordials, of which the following is one of the moſt powerful. R. Pulv. e chelis cancror. compoſ. lap. bezoard oriental. et occident. contrayerv. a ſcr. i. fol. auri n. f. pulvis ſubtiliſſimus. Capiat ad quant. g. xii. quoties opus fuerit, ex ſyr. e ſucco citri et caryophyl. a dr. ii. drinking after it, a julap compounded of ſome of the diſtilled waters. Sect. i. c. iv.

23. Ad ægrum accerſitus, mox ſanguinem e brachio educendum curavi, modo nimia debilitas, præſertim vero provectior ætas non contra indicaret; et venæſectionem inſuper alternis diebus ad duas adhue vices repetendam juſſi, niſi redeuntis ſanitatis ſigna aliter ſuaderent. Diebus interjectis enema e lacte et ſaccharo, vel ſimile injiciendum præcepi; præſcripſi et julapium ſequens vel aliud ejuſmodi, frequenter

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omnem morbi decurſum aſſumendum. R. Aq. Portul. Lactuc. fl. Paralyſ. unc. iii. ſyr. de Limon. ſeſcunc. ſyr. violac. unc. i. cap. unc. iii. quater vel quinquies in die. et ad libitum. Serum lactis, aquam hordei, et ſimilia ejus farinæ pro potu ordinario conceſſi; pro victu juſcula etiam hordeacea, avenacea, panetellam, poma cocta, &c. juſcula vero e carne pullorum, vel ana quæcunque interdixi. Sect. iii. cap. iii. The above is the uſual method of cure which this author adopted in the epidemic of 1667, 1668, and part of 1669. He brings a proof of its efficacy in the example of Dr. Morrice. Hæc febre, cum effuſiſſimis ſudoribus et frequentibus petechiis laborantis; conſentientibus aliis aliquot medicis, utrique noſtrum familiaribus, vena ſecta fuit, ſurrexit e lecto, abſterſo primum ſudore, medicamentis et diæta refrigerantibus uſus eſt, præſentiſſimo cum levamine; et cum eidem methodo inſtitit, intra paucos dies ſanitati reſtitutus eſt. Ibid.

24. The epidemic of part of the years 1669, 1670, 1671, and 1672, aſſumed a different appearance and our author attacked it by a different method of treatment. Quo primum accerſebar die, venam cubiti tundendam ſuaſi, eadem nocte et paregoricum propinavi, et ſequenti aurora potionem hanc catharticam lenitivam. R. Tamarind. ſemun. fol. ſennæ dr. ii. Rhei ſequidr. coq q. ſ. Aquæ. Colaturæ u. iii. diſſolve Man. et ſyr. Roſar. ſolut. unc. i. m. f. p. ſumenda ſummo mane. Sect. iv. cap. iii. He relates the caſe from which the hints of this practice aroſe.

Juvencula a me interrogata de modo quo febris primum invadebat, et de ejuſmodi duratione, faſſa eſt ſe a dyſenteria, quæ tum ubique fere graſſabatur, aquauordecem retro diebus fuiſſe liberatum; cui ſive ſua ſponte decedenti, ſive medicamenti ope depulſæ protinus ſucceſſit dicta febris cum dolore capitis: quibus ego me rectiſſimé occurrere poſſe conjectabam, ſi dyſenteriæ loco aliam evacuationem ſubſtituerem, ejus ſimillimam, quæ præcluſa febris oborta eſt. Itaque aggreſſus erat morbus venæſectionibus et repetitis purgationibus. Ibid.

25. In the epidemic which prevailed during the years 1673, 1674, and 1675, our author adopted the following plan. Hunc itaque curſum inſtitui: ſanguinem e brachii venis mittendum, ea quantitate, quæ ægri viribus, ætati, aliiſque circumſtantiis convenire mihi viſa eſt, ante omnia curabam, atque eodem fere tempore emplaſtrum epiſpaſticum bene largum Nuchæ applicandum. Die proximo clyſterem lenitivum ita tempore injiciendum præcepi, ut ante noctem ſedari poſſet tumultus, qui ab eo inter operandum excitaretur, hora ſcillicet ſecunda tertiave poſt meridiem. Repetebatur enema illud ſingulis diebus donec imminueretur morbivis. Sect. v. cap. ii. He has favoured us with an inſtance of this mode of treatment. Menſe Septembri 1674, filium novennem librarii cujuſdam ædibus meis vicini, nomine Not, hac febre una cum ſymptomate jam ſæpe memorato (ſtupore) laborantem tractabam: Extracto e brachio ſanguine, et clyſteribus, per primos aliquot morbi dies continuos,

continuos, injectis, importuniſſimæ matri obſtabam, quæ rem ocyus expedire acriter urgebat quam ego cum ſalute filii ſtare poſſe arbitrabar. Datis itaque induciis, nullo medicamento alio propinato præter Julapium aliquod e vulgaribus, quod pacandæ quidem matri potius deſtinabatur, quam filio reſtituendo, trigeſſimum circiter diem melius habere cæpit; edulia varia etiam abſurda miſeré diſcupiens, quorum pars aliqua concedebatur, licet nullo alio nomine concedi debuiſſet; atque ita tandem prorſus convaluit. ibid. It is an obſervation worthy of remark, that ſpirit of vitriol was often found ſingularly ſerviceable in the high degrees of delirium, which frequently attended this ſpecies of fever.

26. There is not a great deal of difference in the treatment of the new fever, from that of former years. I ſhall, however, tranſcribe the general ideas, which this author entertained of the nature of the diſeaſe, and the method of cure which he adopted. Nihil aliud eſſe quam ſimplicem ſanguinis inflammationem; ac proinde indicationes curativas ad dictam inflammationem debitis remediis et methodo reprimendam, omnino dirigendas eſſe.—Hunc itaque ductum ſequens, primo loco ſanguinem e brachio dextro adu. x. educi volo. Neque ſane febris hæc (utut ſanguis emiſſus ſæpiſſime pleuriticorum ſanguinem æmulatur) reiteratem phlebotomiam facilé tolerat.—Veſperi epiſpaſticum ſeu veſicatorium Nuchæ appono. Sequente, aurora, lenitivam hanc potionem exhibeo. R. Tamarin. ſemunc. F. Sennæ dr. ii. Rhei ſeſquidr. coq. q. ſ. Aq. adu iii. in colat.

colat. diſſol. Man. & ſyr Roſar. ſolut. a. unc. i. m. f. potio ſumenda ſummo mane. Quod quidem catharticum etiam alternis diebus repetendum præſcribo, donec tertiam vicem expleverit. Hora ſomni poſt catharſin, toties quoties, paregoricum hoc vel ſimile injungo. R. Aq. Paralyſ. unc. ii. ſyr. e Meconio unc. i. ſuc. Limon. recenter extracti cochlearia duo m. f. hauſtus. Id ſc. cavens, ne forte ab agitatione et tumultu, quem in febricitantium ſanguine et humoribus purgantia ſæpe excitant, æger ex ſpirituum animalium confuſione, comatoſus fiat. Quod quidem ſymptoma medicamen tum hypnoticum, quantumlibet contra facere videntur, procul amolitur. ſchedul. monitor.

27. Boerhaaeve's general idea of the cure of fevers conſiſts in the following indications. Curatio optima febrium generalis obtinetur. Si. 1. Vitæ, ejus que viribus conſulitur. 2. Acre irritans corrigitur, expellitur. 3. Lentor diſſolvitur, expellitur. 4. Symptomata mitigantur. Aphor. 598.

28. I ſhall tranſcribe from Stahl's opuſcula chymic. as much of the cure of the petechial fever as may ſerve to give ſome general idea of this author's mode of practice. He has deſcribed with a good deal of accuracy and preciſion, the hiſtory and mode of cure of a particular caſe of this diſeaſe.—Der erſte patient, der ſich meiner cur hierinnen bediente, war ein junger von Adel bey 21 jahrem, ein Schotte von geſchlecht, ſo vordeme Page an unſern Hoff,

anjetſo aber Fuhrer bey der compaynie. Er war hagrer ſtatur, ziemlich lang von perſon, ſonſt eben nicht ungeſund noch ſonders ſwachlich. Dieſmal hat er etliche tage huſtem empfunden, mit einer verd dries lich keit im kopff, einem ſo genanten ſtock-ſchnupffen gleich, mit einer mercklichen tragheit in gliedern, oder vielmehr am ganzen leib, wie man es wohl eher denen an einer perſon umgehenden fluſſen zuzu ſchreiben pfleget. Nach wenigen tagen bekameer gegen abend ohngefehr 5 uhr ziemlich ſtarck froſt: welcher nach ohngefehr einer halben ſtunde ſich in eineziemlich ſtarcke hitze verkehrte, welche die ganze nacht hindurch beſtandig anhielte, und kaum nachfolgenden vormittag twas merckliches gelindert wurd, jedoch dem vollige tag hindurch noch ſehr empfindlich blieb. Um eben die abendſzeit wie am vorigem tage fiele ſie wieder hefftig an, und wehrete eben maſſig die nacht hindurch, nicht allein nach geſtriger art, ſondern wohl ehe noch ſtarcker, auch eben ſo lang mit einerley hefftigheit, ja viel mehr noch langer, bis ſie doch endlich wiederum um den mittag, und von dar biss gegen den abend, etwas ertraglicher ſchiene. Und dieſe art continuirte alſo auch kunfftige tage. Bey allen dieſen umſtanden war zwar noch ziemlich vieles huſten, je doch meiſtens gegen die nacht, als den neuen anſatz des paroxyſmi, deſto hefftiger: kopffſchmerzen hielten beſtand ig an, doch ebenfals gegen die nacht, und durch ſelbige hin, deſto emp findlicher, jedoch waren ſie durgehens nicht ſo gar hefftig arg. Schlief darbey night,

aſs nights, als' etwa einem mund voll bruhe: war ziemlich begierig auf trincken, wiewohl auch ſolches eben nicht ſo euſerſt [illegible]haffig. Hiebey aber ver fiel er am leibe hefftig ſehr. Bey gebrauch gelinder alexi pharmacorum und unter lauffenden abſorbentium und diaphoreticum fixorum, gingen bey eilf tage hin, das er ſo in einerley zuſtande, ſo ziemlich tolerabel ſchiene, ohne einige neuzufalle, oder derer biſherigen einigen anwachs oder beſchlimmerung. Hierauf aber ſchiene es wider umſuſchlagen (es war aber bis dahin und noch dato die wartung ſo ſchlecht als moglich) und hielte ſich der patient abſonderlich wegen leidlicher warme and ertraglicher bedechung gar nicht nach nothdurfft, ſondern bloſs nach ſeinem eigenen willen, welches auf bloſſes ſtetiges lufften und erkuhlen hinaus lief. Er fing alſo an im kopffirne zu werden, redete viel ungereimte einfalle, warf alles von ſich, und jemehr man ihm ſolches verwehren wolte, je mehr er ſich ſtreubete, und daruber muhete und fatigirte, bey ſolchem allen aber continuirlich erkaltete, ohnerachet er doch meiſtenthiels mit einem kleinem madore uber den leib belauffen war. Hierauf bekam er ſchleunig, ja noch ſelbigen tages eine ziemlich offt mahlige diarr heam, nichts deſtoweniger beharrete nicht allein das delirium, ſondern wurde auch an ſtatt es vorhin manchmahlen aufgeſetzet hat, nun mehro continuum, doch nicht violent, ſondern nun fabel hafftig. Dieſes zeug wehrete 5 bis 6 tage nach einander; endlich nahme es ab, horete gar auf, dir patient erholte ſich, wurd geſund, und lebet

Got lob bis an hero gans wohl.—In the cure of this diſeaſe the author appears to have avoided bleeding, vomiting, purging, the ſtronger ſudorifics and opiates, conducting the buſineſs on the following plan. Dabey kehrte ich mich nicht im geringſten an die ſymptomata communia, das ich mich dieſelbigen im wenigſten hatte ſollen irre machen laſſen. Die eſſential ſymptomata aber, reſpectirte ich noch weniger, lieſſe ſie faſten und wachen, bis ſie es ſatt hatten, Deliriren aber, und hefftige kopff ſchmerzen linderte ich, ſo gut als moglich, ſo innerlich, mit diſcutientibus, humectantibus, diluentibus, als auſſerlich mit cam phoratis, und unguento Alabaſtr. Ordinirte, ja injungirte ihnen dabey, ſich zu keinem ſchwitzen zu zwinden, ſondern nur ſo warm zu halten, ut actualis refrigeratio excludatur, ſelbſt an meldenden ſchweiſs aber durch nicht mehrer als jeſto erwehntes regimen abzuwarten, lieſs nicht allein zu, ſondern wo es nicht von ſelbſt geſchahe ordinirte ich, zur nothdurfft zu trincken, ſondernlich wehrender hitze, nur nicht ſehr kalt nichts hitziges und inebriati viſches nich unbeſcheidene ſoffe, nicht eilig nach erſt jeſto eingenomener Artzney. In paroxyſmo ordnete ich Julepos ex aquis diaphoreticis und ſyr acetoſ. citr. mit etwa einer oder anderer analep. aqua, gegen den paroxyſmum, aber gebe ich emulſiones, dermaſſen eingerichtet, das man nicht billiche furcht blaſtiger aengſtiheit halben dabey haben durffte. Dieſes regimen hielte ich, es mochten petechieæ folgen oder nicht. Zumahlen aber ſuchte ich allezeit den leib offen

zu

zu erhalten; und achtete diarrheam ſo wohl durch gehends, als bey ſchon wurcklich erſcheinenden petechiis, nichts im geringſten, nur das der patient ſich nicht dabey unſcheidentlich erkuhlte.—This method of treatment, in the author's opinion, was attended with uncommon ſucceſs, but the remedies in reality appear to be of ſo feeble a kind that they are not capable, perhaps, of occaſioning either much good or harm. He obſerves: Meine medicamenta ſind, eine eſſentia alexiphar maca, aus puren vegetabilibus temperatis, welche ich dann and wann, ſo mir deren vorrath auf einmal entgehet, mit Tinc. Bezoarticæ Michaelis (nicht ſehr cam phorit) und Eſſentiæ Scordii p. æ. ver wechſele) ein pulver ex matre Perlar. oder ocul. Cancror. oder auch wohl conchis noſtralibus, antimonio diaphoretico, und nitro depurato:—und dieſe faſt zum haupt. abſehen.

19. It may not be improper to illuſtrate the practice of Hoffman by ſome particular examples; I ſhall therefore tranſcribe ſome paſſages reſpecting the hiſtory and cure of fevers; and firſt of the Synocha.—Juvenis—Laſſitudinem ſenſit in corpore toto quam excepit extremorum levior refrigeratio, æſtus vero intenſus, pulſus celer, præcordiorum anxietas, anguſtia ſpirandi, et pectoris oppreſſio. Tertio die temporum arteriæ valide pulſarunt, caput intumuit, doluit, oculi protuberarunt, nox inſomnis fuit, urina rubra, ſine ſedimento, et delirare cæpit. Hinc vena ſecta et minimum ſeptem ſanguinis unciæ ſubtractæ, et data mixtura ex aqua

aqua florum ſambuci, acaciæ, ceraſorum nigrorum ana unciis duabus, aceti deſtillati unciæ dimidia, lapidum cancrorum drachma, nitri puri granis xv. ſyrupi papaveris erratici drachmis duabus, de qua ſingulis horis quatuor ſumſit cochlearia. Quum etiam quarto die ſanguis impetuoſius ad caput ferretur, nec tamen hæmorrhagia erumperet, ad diſcuſſionem fronti et temporibus ſæpius tepidé ad motum epithema hoc. R. Aceti roſacei uii. ſpir. Roſar uii. camph. ui. olei. ligni rhodii guttas xxiv. Ad ſitim fallendam æſtumque extinguendum tinctura florum cordal cum ſpiritu nitri *dulci* parata, cervefiæ tenui *pro* potu inſtillata: alvus præterea per aliquot dies clauſa, et clyſtere emoliente, et laxante, ex manna, cremore tartari et rhubarbo quater ſoluta; eoque facto, urina apparuit cocta et ſedimentum incarnati coloris demiſit. Datis demum ulterius bezoardicis temperatis cum tinctura modo dicta, ſenſim conquieverunt ſymptomata, et die ſeptimo pulſuum celeritas remiſit, ſudor largus prodiit, ægerque poſtea ad ſanitatem rediit. De Febr. Syn. Tom. ii. p. 109.—We may remark in general with regard to this mode of practice, that it probably mitigated the violence of the ſymptoms; but we do not perceive that it had any effect upon the courſe, and probably very little upon the ultimate event of the diſeaſe.—I ſhall likewiſe mention the plan of cure, which this author appears to have followed in that ſpecies of fever which he diſtinguiſhes by the name of ardent. Duci militari invaſit hæc febris,—cum artium tremore juncta fuit ſumma præcordiorum

rum anxietas, æſtus in pectore ingens, capitis dolor, ſomnolentia, nec non mentis emotio. Conqueſtus eſt ſimul de doloris lateris dextri, et quarto die expuit tuſſi ſanguinem cum pituita mixtum. Secta fuit in principio vena, ſed quia inde nullum levamen, vocarunt me. Erat autem æger, quum advenirem, impatiens quandoque et irrequietus, quandoque ſommolentia et torpore obrutus, ſitis ingens, alvus aſtricta, calor vehemens, urina tenuis flammea.—Clyſma emoliens et relaxans ex ſero lactis, melle ac oleo amygdalarum dulcium, cum momento nitri alvo injicere juſſi ad uncias duodecem aliquoties, non tamen ad purgandum, quam potius ad humectandas et relaxandas inteſtinorum tunicas, ſiquidem clyſteres ſtimulo carentes, aliquoties injecti et diutius retenti, balneum quaſi præbent internam.——Emulſionem conficiendam ſcripſi ex decocti cornu cervi menſura, amygd. dulc. ſeſcun. ſemin. quatuor frigid. major a. dr. ii. additis aquæ ceraſorum nigrorum u. ii. totidemque roſarum, matris perlar. nitri de purati a. dr. i. julep. roſar. unc. i. Hanc inter aliquot horas ebibit, ac præterea pliſanam ex hordeo, raſur. C. C. et ſcorzonera, tam avide ob ingentem ſitim ingurgitavit, ut viginti quatuor horarum ſpatio, vel ſeptem ejus menſuras epotavit, idque per aliquot dies. Dedi etiam juſculum avenaceum cum aliquot cochlearibus olei amygd. dulc. Et exterius thoracem dolentem atque præcordia inungere juſſi linimento ex ol. amygd. dulc. u. i. camph. dr. i. et extract. caſtorei liquid. ſemidr. His æſtus reſtinctus, ſeptimo die urina turbata ac nonnihil ad fundum dimiſit. Acceſſit

nono

nono die diarrhea, ut plus quam decies intra diem et noctem dejecerat, cum levibus torminibus in ventre. Succeſſit hic fluxus alvi per quatriduum, ac interea nihil ſumſit quam juſcula confortantia carnium cum tantillo vini et macis. Sic feliciſſime febris ſoluta, eoque facto, vires redierunt cum ſanitate. De Febr. Ard. Tom. II. p. 117.—The ſame author has alſo mentioned ſome inſtances, where copious draughts of cold water appear to have cut ſhort the courſe of the diſeaſe more ſpeedily. He has likewiſe treated of the petechial fever, which we have found deſcribed by Stahl; but though his mode of practice has in reality the appear- of greater deciſion, we do not in fact find that he boaſted of greater ſucceſs than his celebrated contemporary.

NOTES

NOTES

TO THE

CHAPTER

UPON

YELLOW FEVER.

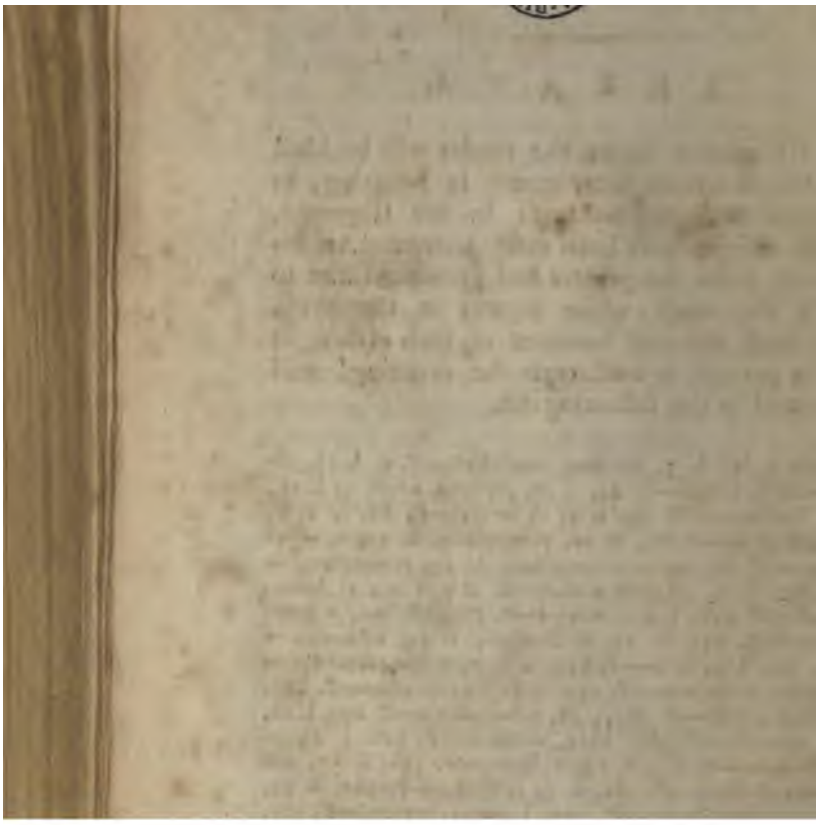
(a) IN compliance with the language of medical authors, I have deſcribed the following diſeaſe under the name of Yellow Fever, though I am perfectly ſenſible, that the appellation is not by any means proper. There are ſome inſtances of the diſeaſe perhaps where yellowneſs does not at all appear, and in no one does it ordinarily ſhew itſelf till the latter ſtages. I know alſo that moſt of the practitioners

of Jamaica conſider it only as an aggravated ſpecies of the remittent; the common endemic of hot climates. It appeared to me I muſt confeſs in a different light; but I ſhall attempt to deſcribe the two diſeaſes accurately, and leave it to the reader to judge for himſelf. It may not however be improper in this place to take notice of the opinion of Dr. Moſeley. Dr. Moſeley has lately written a treatiſe on this diſeaſe, and endeavoured to perſuade us that it is no other than the Καυσος, or ardent fever of the ancients. But the yellow fever of the Weſt Indies, by Dr. Moſeley's own confeſſion, is in ſome manner peculiar to ſtrangers newly arrived in tropical climates. The Καυσος we are informed, made its appearance in the iſlands of the Archipelago, and on the coaſts of the contiguous continents indiſcriminately among men and women, natives or foreigners: in fact it has not, as far as I can perceive, any claim to be conſidered as a diſtinct ſpecies of diſeaſe. If I rightly underſtand the ſpirit of Hippocrates, or the deſcription of the ſtill more accurate Aretæus, Καυσος in reality is only an accidental condition of the common endemic of the country, where the force of the fever is chiefly exerted upon the ſtomach and alimentary canal. In this manner it appears frequently in Jamaica, and in the ſouthern provinces of America In the hot months of ſummer, it appears occaſionally in every climate: and is not neceſſarily accompanied with, nor does it depend upon a general inflammatory diatheſis of the ſyſtem for its exiſtence.

6. Au-

6. Authors ſeem generally to have attributed the black colour of the vomitings obſerved in this diſeaſe to blood effuſed into the cavity of the ſtomach; but the falſity of this opinion is ſufficiently proved by the appearances which are obſerved on diſſection.

ERRATA.

THE author hopes the reader will be kind enough to excuſe ſome errors in pointing, as likewiſe ſome aukwardneſs in the language, which might have been eaſily corrected, if his diſtance from the printer had permitted him to reviſe the work while it was in the preſs. The moſt material however of ſuch errors, as might pervert or embarraſs the meaning, will be found in the following liſt.

Preface p. iv. l. 7. *for* they *read* theſe—P. v. l. 16, *for* Lucca *r.* Lucea—P. 24, l. 26, *for* no *r.* a—P. 57 l. 18, *r.* Tralliianus—P. 59, l. 4, *r.* revival—P. 61, l. 2, *r.* Archigenes—P. 61, l. 10, *r.* προσθισις, l. 12, *r.* προσθισις.—P. 63, l. 12, *r.* προσθισις, l. 13, *r.* προσθισις.—P. 87, l. 19, *for* them *r.* thoſe—P. 109, l. 20, *r.* Antiochus—P. 117, l. 4, *r.* συνσχοι—P. 120, laſt line, *r.* exertions—P. 128, l. 23, *r.* Strahlian, l. 24, αυλοκαλια—P. 134, l. 3, *r.* be—P. 149, l. 9, *r.* to the actual obſervation of the caſe—P. 151, l. 8, *r.* evacuation—P. 184, l. 8, *r.* greaſy—P. 287, l. 28, *r.* ſuccuſſions—P. 293, l. 28, *r.* ſporadic—P. 307, l. 14, *r.* ſomes—P. 326, l. 12, *r.* eliminate—P. 331, l. 14, *r.* cauſe—P. 351, l. 15, *add* their doctrine—P. 361, l. 7, *r.* Cteſias—P. 362, l. 15, *r.* Khoſrou Parviz—P. 371, l. 25, *r.* treated—P. 375, l. 29, *r.* fact—P. 377, l. 27, *eraſe* not—P. 389, l. 3, *r.* revived.